

Journal of the American Society of Professional Graphologists

A Tribute To Dan Anthony

Alan Levine, M.D., et al.

Graphological Typology for Visionaries

Ruth Elliott Holmes

Indicators of Sexual Abuse in Handwriting

Suzy Ward

Alcohol Abuse Therapy & Handwriting

E. Edward Peeples, Ph.D. & George Bishop

Measuring Handwriting to Identify Thinking & Behavioral Styles in Four Quadrants of the Brain

Jeanette Farmer

Value of Graphological Training for the Handwriting Identification Expert

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High Stakes: The Gamble for the Howard Hughes Mormon Will

Marc J. Seifer, Ph.D.

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THE JOURNAL OF THE AMERICAN SOCIETY OF PROFESSIONAL GRAPHOLOGISTS

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PURPOSE OF THE JOURNAL

1. To present theoretical and research papers in scientific graphology according to traditional academic standards.
2. To create a forum for helping graphology gain a wider academic and professional audience in America.
3. To interface with the international professional graphological community.

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American Society of Professional Graphologists

LETTER FROM EDITOR

The present issue of the *Journal*, begins with a tribute to our society's mentor, Dan Anthony. I am pleased to announce that we have a capstone essay on this topic by Richard Orsini, one of Dan's latest students. Through Richard's eyes, we get a rare glimpse of what it is like to study graphology with Dan Anthony.

As can be seen from her biography, Ruth Holmes has become one of the most successful graphologists in the country. She is a positive thinking go-getter, who was able to get involved with *Aquarian Conspiracy* author, Marilyn Ferguson, and her new project on visionaries. While speaking at a handwriting conference in Santa Fe, (where she showed such writings as that of Vice President Al Gore) she was able to sit down with me and go through approximately 50 of the handwritings of the many political, business and academic leaders in the country that she had with her. After looking through the samples, we were able to begin to see a variety of groups emerge, and so began Ruth's paper, a Graphological Typology for Visionaries. Essentially, Ruth saw that handwritings of these individuals ranged from (1) somewhat conforming scripts to (2) conflicted/compensated, to (3) productive/versatile to (4) empowered. This last group, which has the very highest form level, epitomizes the essence of creativity as seen in handwriting.

This past year, six well-known graphologists passed away, Felix Klein, Christian Dettweiler, Ed O'Neill, Marie Bernard, Betty Delmar and Elizabeth King. A "Memorial" section has been included to briefly review the lives and some thoughts about these colleagues.

The next article, by Herry O. Teltscher, Ph.D., contains an astute blind analysis of the handwriting of a Swiss nanny who was accused of leaving a baby to die in a suspicious fire. This analysis was published in the book *Circle of Fire* by Joyce Egginton. Our congratulations are extended to Dr. Teltscher!

The problem of how graphologists can begin to apply the scientific method to the field, is the topic of the next article written by Thelma Seifer. Three such studies follow, the first by Ed Peeples, Ph.D., and George Bishop on the handwriting of individuals who have received psychotherapy for alcohol abuse, the second by Suzy Ward on indicators of sexual abuse in writing, and the last by Jeanette Farmer on personality types and brain dominance.

Ed a geneticist and graphologists, and his partner, George Bishop, a handwriting analyst and counselor, studied the handwritings of recovering alcoholics who had gone through psychotherapy. Their writings were measured, and compared to matched controls for such factors as size and space allocation of upper and lowercase letters and also for the personal pronoun I. Significant differences between these groups was noted.

Suzy Ward, a handwriting analyst from Colorado, was also looking for similarities and differences in her target population, individuals who had been sexually abused as children. This is a very important topic, and one which was extremely difficult to obtain information on. Suzy tells us that promising confidentiality to the therapists who diagnosed these cases was an important key that allowed her to obtain so many samples. The only handwritings that Suzy ever presents in her lectures and articles are the ones that the patients themselves have allowed to be exhibited. Through Suzy's research, a number of key graphics appeared to emerge which were common to the writings of many of these people. By setting up an extensive check list for particular psychomotor patterns, a profile, converted to a bar chart, was constructed which reflected not only the types of graphic patterns often found in these writers, but also the relative strength of each pattern. As you will see, the potential predictive possibilities of this kind of technique for other populations is very great. Suzy has designed a protocol that may have an important impact for the future of this field as an experimental science.

The next article, and by far, the most ambitious herein, is by Jeanette Farmer, from Denver. Using a chart based on the graphological Psychogram and also a self-test for brain dominance called the Herrmann Brain Dominance Instrument (HBDI), Jeanette was able to construct two separate mandala-shaped measuring tools which portrayed tendencies for individuals studied to emphasize or de-emphasize one or more of the four quadrants of the brain: the Left Cerebral (THINKING), Right Cerebral (INTUITIVE), Left Limbic (SENSING), and Right Limbic (EMOTIONAL) centers. By using a computer, Jeanette was also able to superimpose the psychogram-based profile over the HBDI. This a very difficult article to comprehend, but well worth the effort. I was particularly interested in it because it so closely paralleled my own Masters Thesis, *Levels of Mind*, which I wrote at the University of Chicago in 1973/74. In it, I suggested that each hemisphere had a CONSCIOUS and UNCONSCIOUS, thus, four quadrants, (which I also linked to Jung's four types). The Left Hemisphere with two quadrants, was more conscious than the right hemisphere. Thus, the most conscious quadrant, (i.e., the conscious part of the conscious hemisphere) would be the Left Cerebral, and the most unconscious quadrant, (the unconscious part of the less conscious hemisphere) would be the Right Limbic. People who emphasized the Left Cerebral would be the great intellects like Darwin and Einstein, and people who emphasized the Right Limbic, would be the ones most closely tied to the primordial unconscious, for instance, Rudolf Steiner or Jane Roberts.

The last two articles, by Patricia Siegel and Marc Seifer, Ph.D., are on the topic of questioned documents. Many graphologists, who are also questioned document experts, have run into the problem of being confronted by an opposing

attorney who attacks their credibility for the very reason that they have studied handwriting analysis. For the opposing attorney, this choice of interest borders on believing in the occult. So, as many of us know from direct experience, the handwriting expert who has no knowledge of graphology is somehow able to attain the high "untainted" ground, when the irony of the situation is that the QD expert who rebukes graphology knows less about hand-writing than the graphologist. Patricia Siegel offers important suggestions for battling this common problem by pointing out key advantages the graphologist has over the more limited QD expert.

The last article, by myself, is about one of the most fascinating questioned document cases in the last 50 years, that of the Howard Hughes Mormon Will. After reading Harold Rhoden's splendid text *High Stakes*, which is about Rhoden's attempt to defend the authenticity of the will, I contacted Mr. Rhoden so that I could better able investigate the subject. Mr. Rhoden was kind enough to provide me with an excellent copy of the will, and also fifty or more Howard Hughes' exemplars. From this and other material on Hughes' handwriting, I was able to present enough evidence to make the case that the will, although ruled a forgery, was in fact genuine. Read the article, and the book and decide for yourself!

INTERNATIONAL SCENE

There is a new bi-yearly journal in our field entitled *Graphological Anthropology*, which is produced in Italy but written in English. This is a high quality journal, perfect bound, with a beautiful four-color painting of a medieval scribe on the cover. Their first issue is devoted to a discussion of whether or not graphology is a psychological science. There are no handwriting samples in this first issue. The editorial board includes C. Gille-Maisani from Canada, R. Nezos from Great Britain, H. Ploog from Germany and our own T. Stein-Lewinson from the United States. Subscriptions are \$60. Contact address: Angelo Pontecorboli, Editor, Via S. Slataper 10 - 50134, Fierenze (Florence), Italy.

The 1996 British Symposium on Graphology will be held August 9th-11th at Kings College, Cambridge University, England. Abstracts submitted should be typed with double spacing on two pages. The first page should include the title of the paper, name, telephone number and qualifications of the author. The second page should consist of the title of the paper and a 200-500 word abstract. Address: Call for Papers, The British Institute of Graphologists, 24-26 High Street, Hampton Hill, Middlesex, TW12 1PD, England. Deadline for Abstracts: January, 1996.

Marc J. Seifer, Ph.D.



Y. Rabin
Yitzhak Rabin
Prime Minister of Israel

10.9.93



Photographs by Associated Press

Yasser Arafat
Chairman
Palestine Liberation Organization
1993

THE PEN REPLACING THE SWORD.

THE MENTOR

A Tribute to Dan Anthony

ABSTRACT: In recognition of Dan Anthony's achievements in Graphology, impact on our lives and on this society, he was awarded, along with his wife, Florence, the ASPG Lifetime Achievement Award on May 7, 1994. Following the Proclamation and the testimonial from the New School are a few of the remembrances from some of his students, and a final article by Dan's latest graphology student.

the american society of professional graphologists

honors

DANIEL S. ANTHONY

for his lifetime achievement in graphology and handwriting identification

and

DANIEL S. ANTHONY & FLORENCE R. ANTHONY

for their inspirational teaching at the new school for social research



Daniel S. Anthony's acute understanding of graphic expression and his innovative explorations into the psychology of handwriting have contributed significantly to advancing handwriting analysis in America and abroad.

Daniel S. Anthony & Florence R. Anthony devoted twenty years as faculty members at the New School for Social Research where they guided and motivated the next generation of future graphologists to the highest standards of the profession.

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Lois Vairman
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may 1994

New School for Social Research**66 West 12th Street, New York, NY 10011**

May 7, 1994

On behalf of the New School, I wish to congratulate Daniel Anthony for the well deserved award he is receiving tonight honoring him and his wife Florence Anthony. For some twenty years, the Anthonys brought their interest in graphology to the New School and, via their standards of excellence, enabled the school to make its mark in this innovative field. They built on both the School's interest in developments in European social science and its mission in educating adult students. While the work of the Anthony's has been carried out by others -- namely Pat Siegel and Lois Vaisman -- the tone and quality was set by the Anthonys. Their work enhanced our psychology program and imbued it with the highest standards of excellence.

Our congratulations!

Best,

Sondra Farganis

Associate Dean for Academic Affairs

Chair, Social Sciences

INTRODUCTION***Alan Levine, M.D., President******American Society of Professional Graphologists***

Graphology at the New School for Social Research in New York City was undergoing some exciting changes in the early 80's, and I was fortunate to start my formal training just at that time. The full course of 8 semesters was conducted by two young, enthusiastic, intelligent women, Patricia Siegel and Lois Vaisman. Both had completed their graphological studies at the New School under the tutelage of Dan and Florence Anthony. Dan and Florence had just retired, and passed the baton to Patricia and Lois.

One of the first topics we studied was the Psychogram with a guide prepared by Dan Anthony. In many of the subsequent sessions, we inevitably heard references to other Anthony methods, thoughts and approaches. Currently, there are many generations of New School graphology graduates who have benefited from the knowledge and experience of the Anthonys, and this is a legacy of which Dan can be very proud. It is a pleasure to honor Dan for his lifetime achievements and to honor both Dan and Florence for their contributions to the New School and all of us.

HONORS WELL DESERVED

Patricia Siegel

It was twenty-two years ago that I was flipping through *The New School Bulletin* and came across a course on graphology. I signed up, and Daniel and Florence Anthony introduced me to a magical new world. I was hooked, and my initial fascination with handwriting remains as strong today. My avocation turned into my occupation, and Lois and I found ourselves teaching graphology and trying, somehow, to fill the shoes of our mentors. The Roman-Anthony legacy was not an easy act to follow.

This award to Daniel and Florence Anthony represents an honor well deserved and long overdue. Here's a little background:

Dan Anthony graduated Brown University, was a Ford foundation research fellow at Rutgers University in criminology, sociology and psychology and served as director of the Newark Human Rights Commission. He has a heritage when it comes to civil rights causes as his great aunt was the famous suffragette, Susan B. Anthony. Florence was also socially aware and was particularly concerned about women's issues. That was before the time women's issues were in the spotlight.

Dan was a well-known graphological consultant to insurance companies. His expertise on the handwriting of sales personalities significantly reduced employee turnover. In his quests to learn and know more, he refined the Roman Psychogram and experimented with innovative diagramming of the unconscious in handwriting. With Florence's support, Dan gave lectures on handwriting analysis at Harvard, Princeton and New York Universities. And, of course, in addition to the *Psychogram Guide*, Dan authored many articles.

At The New School, Florence set firm foundations for students in the introductory course while Dan built on their knowledge with a dynamic style, brilliant insights and incisive understanding of handwriting as a projective diagnostic technique.

Florence concentrated on discipline. Dan focused on description and color of presentation, but they both had high expectations. Students looked hopefully for the "correct" check marks which would trail through the homework analyses they graded each week. Words of encouragement and praise were especially appreciated vindicating the students' struggle to integrate the *Gestalt*. Together, Dan and Florence molded a program that inspired and expanded awareness.

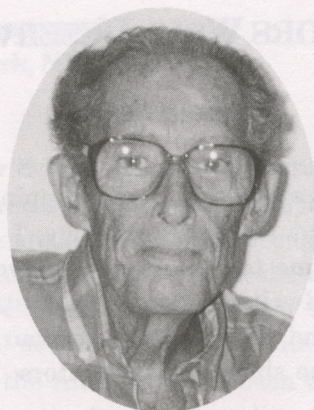


Photo credit: Maria Victoria Sen

Dan Anthony

Florence was greatly influenced by the work and teachings of Dr. Rudolf Arnheim. In a tribute, to Florence's memory, I quoted Dr. Arnheim's recollection of her: "Florence Anthony... saw the rhythm, the very melody of handwriting the way she perceived a painting or a piece of music; and it was this similarity of approach that attracted me to her and her husband's teaching at the New School."

Dan's and Florence's greatest gift to me, aside from the knowledge they instilled and the opportunities they opened up, was the material they left behind to guide our way. Throughout the last fifteen years, Lois and I have intermittently discovered unopened files with handwritten messages, notes and analyses from Dan and Florence. No presence could be more personal to me as a graphologist, no essence so vivid as their handwritten impression.

Through Florence's many brief handwritten messages to me, she managed to give me support even when she wasn't around, little tidbits about personalities [of the assigned writings] or teaching suggestions in her familiar script.

You get an idea of what it was like to have Dan in the classroom from his analysis of a writer and satirist. Dan mentions "the lyrical and effervescent flow of his deep digging and dramatic ductus." And later, "The picturesque, Elizabethan quality of many of his letter forms depicts his throwback to glory and gloom of an historical past. His handwriting is a modern creative exposition of the 'Jungian tribal unconscious,' not yet to forsake the song of yesterday for the promise of tomorrow." And so it goes. His descriptions painted a picture you could feel and sense. There was activity and tension in the classroom which was stimulating, sometimes tough, but not dull. Florence provided focus and Dan inspired intuitive understanding. Together, they challenged each student's potential. It was a winning combination.

Lois Vaisman

Daniel Anthony and graphology are a natural association. Dan and his wife, Florence are in the forefront for helping graphology gain academic acceptance in America. What this team developed and taught has left a legacy for generations to follow: continued high standards at the New School and in private practice.

Dan was a demanding and intellectually challenging teacher who was never willing to accept mediocrity. At times, Dan could be intimidating in his relentless pursuit of excellence. He encouraged his students to reach beyond their limits in order to seek a greater understanding of all areas related to the human mind. Dan was, and still is, unique in his ability to see beyond the prosaic with a confidence and strength to stand firm in his opinion.

The academic atmosphere at the New School was a venture into a specialization few of us knew. Dan was our mentor leading us into new dimensions of learning. His support in the instruction of graphology has left an imprint in so many minds.

For me, the study of graphology has become a focus of my academic studies, defining for me what would become one of my proudest achievements: being asked to teach along with Patricia Siegel the handwriting program at the New School.

Dan, I want to acknowledge today, the gratitude I have for you. You provided the direction and saw my potential before I knew it was there. Your endorsement and belief in my capability has always been a mantra in my mind, even now, whenever I teach or speak about graphology.

And when someone asks me how I became interested in handwriting analysis I say that the interest was always there, but the skill and desire to devote my resources to study graphology... Well that's a different story. You see, I had a charismatic instructor who opened a vast world to me.

As the American Society of Professional Graphologists honors you today, Dan, we thank you for your contribution to the field. You have enriched graphology with your talent and expertise. We are indeed fortunate to carry on the wisdom of your teachings.

Marc J. Seifer

In 1970, shortly after my college graduation at the University of Rhode Island, I read an article by Dan Anthony on handwriting analysis. I was intrigued with the idea that an investigator could uncover the personality of an individual for no other reason than by studying a sample of his handwriting.

In September, I moved back down to New York and signed up at the New School For Social Research to begin my course of study with Florence and Dan Anthony. As my mother was, independent of me, also interested in graphology, this became a perfect opportunity for both of us to study together, and we did, for five semesters.

Florence taught the Psychogram, which, of course, was the brilliant construction designed by Klara Roman and her student, Dan Anthony, and Dan took us to greater depths in later courses by introducing us to Mendel, Sonnemann, Saudek, Stein-Lewinson, Werner Wolff and the Russian neurophysiologist Alexander Luria.

As the years have progressed, I have come to appreciate even more, Dan's *Psychogram Workbook*. Through its elegant simplicity, it covers many in-depth concepts difficult to find anywhere else. This is a major work which should be more widely read especially by those handwriting analysts who are unfamiliar with the Psychogram.

Every week, we had a different writing to analyze, and every week, Dan wrote his comments on our reports. Looking back 25 years, I still think that Dan was the most astute graphologist I have ever known. He taught us numerous techniques, such as how to study printscript, the relationship between touchpoint analysis and the creativity of the writer, the link between the physical act of writing as an expressive gesture to the writer's personality, and also such ideas as taking a pen and actually tracing over the writing of the sample being analyzed so that the actual motor movements involved could be better understood by the analyst.

Oftentimes Dan had the ability to point out an insight overlooked by everyone else which simultaneously got to the heart of the writing. I always wanted to know *where* he saws the graphic that led him to his supposition, and Dan always revealed the source of his insight, for it was always there, in the writing.

An expert's expert, Dan Anthony always knew what he was saying and always had the ability to explain the basis of his hypothesis.

I am pleased with my mother Thelma Imber Seifer, to give my hearty congratulations to Dan Anthony and his wife Florence for all of their many contributions to the field of graphology.

Renata Propper

There are in everybody's destiny a few people who change the course of one's life. Dan Anthony was such a person for me. Little did I know when I first approached Dan and Florence, the impact and influence their teaching was going

to have, professionally and personally -- opening new horizons and vistas. What more can a teacher wish for, than contributing to an individual's development and growth? Dan Anthony was such a man.

He and Florence, with their unerring dedication and enthusiasm for graphology, were able to relegate their own to many of their students, who shared their interest and curiosity in the human psyche. Their teaching went well beyond the discipline of the subject. To embark on a course with them, was a stimulating rewarding journey, full of variety and fun -- but ultimately firmly focused on the deeper understanding of our craft.

Dan and Florence complemented each other wonderfully. She implanted us with the solid basics, whetting our appetite -- preparing us for Dan's artistic-creative approach and touch of The Master! He was not always easy to follow, he was demanding, sometimes impatient and sarcastic, but he was always interesting and stimulating, coaxing us to take the next step, a risk maybe, that forced us to learn to trust our instincts.

Wednesdays at the New School were an experience not to be missed. We all will carry the memory in our hearts forever. Today, we are here to honor Dan and say thank you to him, but also Florence for their giving generosity to their students, as well as for their contributions to graphology in America. Dan, himself, following in the footsteps of Klara Roman, gave graphology serious and useful respectability and quality, on which he never compromised. He demanded the same standard of his students which he himself was prepared to offer. His spirit shall instill us all to follow his inspirations and live up to his expectations.

THE NEW INITIATE

Richard Orsini

In the fall of 1991, as I approached my bed for yet another night's sleep, a yellow book on the night stand caught my eye. It was entitled *Handwriting Analysis*, and I felt confident that my wife Niko had misplaced her latest venture into the occult. (I was to find out later that the book was meant for me, not her.)

This text would certainly replace any sleep medication, so I charged right in. Having studied Latin, Spanish, German and Russian, my love of languages made me quite receptive to the interaction between specific graphic movement and their related meanings. This was similar to learning another language. Was this concept genuine? Could this relationship between pen and personality be true? I left the bed and headed for the living room -- no time to sleep when you have intellectual

pizza to digest!

The sunrise did not seem to disturb me as much as my wife's surprise at seeing me still reading. I could not put the book down; I was lost now and there was no turning back. Did people actually do this for a living? After two or three more books, my addiction for more information developed and a school for graphology was located -- the New School For Social Research in New York City. It was (and is) a highly accredited school, but 2,000 miles away. This would be a tough commute. I called and was in communication with Patricia Siegel, one of the two principal instructors for graphology. I asked her several inarticulate questions, and she asked me a fateful one:

"Where do you live?"

"Satellite Beach, Florida," I told her.

"How close are you to Fort Lauderdale?"

"About two and a half hours.... Why?"

"I'll give you a name and address of someone to call," she said. "He used to teach here and maybe he will take you on as a student. His name is Dan Anthony."

Having never heard of Dan Anthony or anyone in this field, I made note of the information, thanked her for her time, and decided to call him. The following conversation ensued:

"Hello, Mr. Anthony?"

"Yes."

"I am very interested in learning more about graphology and Patricia Siegel, of the New School, suggested I give you a call."

"What books have you read?"

I listed the few paperbacks I had reviewed.

"Read Saudek and Roman -- then call me." Click. End of conversation. The voice was stern and no nonsense. This would be a tough sell.

I immediately purchased Saudek's *Experiments With Handwriting* and *The Psychology of Handwriting*, as well as Klara Roman's *Handwriting: A Key to Personality*. I did not read them -- I devoured them. The books were originally black and white, but they took on a more colorful appearance due to my excessive highlighting. Time to call Mr. Anthony again.

"Hello, Mr. Anthony?"

"Yes."

"This is Richard Orsini -- you asked me to read those books?"

"Did you?"

"Yes."

"I would like you to come down for **An Interview** this Saturday at 10:00 AM."

Click.

I hung up and my palms were sweating. Who *is* this guy? I do not think I am going to enjoy this.

Saturday morning came, and I found myself with one hand on the steering wheel and the other reading the highlights of Saudek's description of speed in handwriting. I felt like I was heading for a job interview. Approaching the modest condominium, I rang the bell, and was greeted by a Lincolnesque figure, who smiled briefly and said he was Dan Anthony. He led me into a small living room. He sat on the center of the couch and pointed to a single chair that stood in the middle of the floor. Images of an interrogation raced through my mind.

After a few moments of small talk about traffic and driving, almost on cue, a woman entered the room carrying some papers and introduced herself as Ali Crosslyn, an associate and former student. She stated with a strong German accent that before becoming a student, I would be required to provide a sample of my handwriting to Mr. Anthony. (It *was* going to be an interrogation.) She led me through a small kitchen to the dining room table, placed a small magazine down, a sheet of unlined paper on top of the magazine, and handed me a pen. She instructed me to write whatever I wished as long as it was a full page.

Not only was I having difficulty in thinking about the subject matter, I was having difficulty writing. My mind was trying to consider all the positive graphological features found in an "intelligent, warm, determined, persevering, creative," and "studious" handwriting. Instead, I found myself writing all the opposite features. Ali stood over me, arms crossed, watching me without comment. My hand started to moisten and my muscles tightened. This was a losing battle. Halfway down the page, I discontinued the cursive writing and elected to print the remainder of the page. (Oh well, there's always golf.)

I was then instructed to perform a Nine Signature Protocol on the back of the paper that involved writing my signature nine times, six with my eyes closed. This was not exactly what I had in mind to calm me down.

Ali announced it was now time to bring the results to Dan and have him "review" the handwriting.

As we passed the front door heading towards the living room where I knew *he* was waiting, I considered a last escape out the front door. I knew under normal circumstances I could outrun the both of them, but these were not normal circumstances. Ali had seated me in the living room chair before I could decide. She handed my sample to him and sat quietly to his left.

Dan immediately felt the back of the paper, mumbled, and quietly continue to seek out the clues to my personality.

After what seemed like an hour, he looked up at me and said, "Your handwriting is @#\$\$%^, but your printing is excellent -- you should print from now on." I agreed to never write another word. He continued, "You're a volcano of energy. Because of your printing, and the creative productive ego found in your Nine Signature Protocol, I will teach you. You are to come down here every weekend until I feel you are ready. Agreed?"

"Yes," I replied in a volcanic shout.

As I departed, Ali handed me some papers for study and some personal background on Dan. It wasn't until I was home that I truly learned who Daniel S. Anthony is.

I learned about his 50-year career in graphology; his teaching at Harvard, Princeton, Rutgers and New York University; his document work on Capitol Hill; the Sharon Tate-Charles Manson murder investigation; the Son of Sam case; his personnel work with AT&T, General Motors, and Westinghouse; his articles and coverage in *Newsweek*, *Psychology Today*, the *Wall Street Journal*.

As the weeks flew by, I learned about Dan's personal relationships with the authors of the books I was reading. It was interesting to hear him describe individual authors as friends or opponents with insights into their personalities not found in their books. I learned about the Psychogram, the Nine Signature Protocol, how to analyze printing as compared to cursive, diagrams of the unconscious, and life. I saw books that are no longer in print, museum paintings and photographs, and had access to file cabinets reserved to those precious few students who have experienced his personal tutelage. Dan never provided an abundance of information -- he provided small slices. He encouraged me to find the answers for myself. When he spoke -- I listened.

In February of 1993, I received a diploma from Daniel S. Anthony, as his latest student. It is the most meaningful one in my growing collection.

BIOGRAPHY: Richard Orsini is a 1969 graduate of Niagara University where he majored in German language, and he holds a Master of Science degree in business from the University of Arkansas. Upon graduation from the Defense Language Institute at Syracuse University, Mr. Orsini served as a Russian translator with the US Air Force in Germany and Turkey from 1970-73, and was awarded the Air Medal. He is a certified graphologist with the American Handwriting Analysis Foundation, a member of the American Board of Forensic Examiners and a member of the National Association of Document Examiners. He has also completed Advanced Document Examination studies with Andrew Bradley & Associates.

GRAPHOLOGICAL TYPOLOGY FOR VISIONARIES

Ruth Elliott Holmes

ABSTRACT: The handwriting of approximately 100 visionary leaders in such fields as business, science, education, art, politics and film was analyzed and categorized. Four distinct types of creativity emerged: (1) Conforming-Creative (2) Compensated-Conflicted (3) Productive-Versatile, and (4) Empowered. Common traits and distinct differences among all these individuals was assessed.

INTRODUCTION

When Marilyn Ferguson's book the *Aquarian Conspiracy* was published in 1980, it was hailed by the *Los Angeles Times* as "the watershed book of the New Age." It has been translated into ten languages and has sold 600,000 copies around the world. Acclaimed by the most influential thinkers and social planners of our time, this book describes the "conspiracy" in all areas of our lives, from politics, religion, economics, education and medicine to families and individuals. Marilyn Ferguson writes of the network of people "breathing together," who are quietly and powerfully changing the way consciousness is being raised as we move into the next century.

In 1989, Ferguson embarked on yet another seminal project. Her quest this time was to identify "natural visionary abilities" in individuals whose accomplishments were noteworthy in a variety of vocations from nationally-recognized leaders in business and industry to teachers, therapists, writers, scientists, artists, inventors, politicians and film makers. The "visions" of these people encompassed original products and services, art and films, scientific theories and books. Each of these individuals were successful in their own right. They had overcome obstacles, met personal and professional challenges and were prepared to share their experiences.

Approximately 100 individuals were carefully selected for their achievements. They agreed to participate in their own evaluations through eight forms of testing, which included the Herrmann Brain Dominance Instrument, the Birkman Method, the Gregorc Style Delineator, and birth, voice, body, hand and morphological analysis. In addition, the participants were asked to complete extensive six-page surveys. Questions ranged from asking for details on their earliest memories of "vision" to questions about their most valuable mistakes.

METHOD

In 1989, handwriting samples were requested, and handwriting analysis was added to the research design. The ground was laid for a comprehensive evaluation of a number of high level thinkers and achievers.

Participants in the Visionary Survey were asked to submit "a handwriting sample of several non-committal lines" with a signature on an 8 1/2" x 1" paper. Not everyone followed these instructions, but profiles were constructed with whatever samples were submitted. The results were communicated to the participants individually in taped consultations or in person when 40 of these subjects met in Los Angeles.

At this meeting, the five members of the research team were asked to present their testing methods and the result of their evaluations on each of the participants as each visionary recounted his or her own life story. Researchers attending were psychologists Roy Mefferd and Roger Birkman of Texas, whose psychological profile evaluation is used in management development; Sandra Seagal and David Horne of California, whose expertise is in voice and body dynamics, and myself, the handwriting examiner.

Through dialogue with the participants, in a number of instances, greater depth of understanding could be achieved. The goal was not to prove or disprove the merits of graphology, but rather to create in-depth profiles on each subject. Individual sessions with many of the participants also served to strengthen and/or challenge the veracity of the findings.

DISCUSSION

Ferguson suggests in her upcoming text on visionaries, that a new way of thinking and processing information is necessary, if we are to meet the demands of the next century. A change in paradigm in our educational institutions, offices, factories, laboratories and political corridors is essential. Ferguson believes that if the common traits of the "visionaries" could be identified and quantified by various psychological, graphological and other tests, then information could be taught in our school systems to enhance these traits in upcoming generations.

One feature that appeared consistently was that these subjects tended to succeed in initiating and actualizing their original ideas in spite of all obstacles. Eager communicators, the study group willingly revealed their techniques of how, from diverse backgrounds, they reached the top in their respective fields of expertise.

ANALYSIS

Despite large differences, many of the subjects shared the following characteristics:

CHARACTERS

- a. An abundance of energy and good judgement.
- b. Intelligence coupled with common sense.
- c. A powerful determination to overcome obstacles.

GRAPHICS

- Good pressure and excellent line spacing.
- Originality in letter forms and clarity.
- Well-balanced writing (tri-zonal dynamics) and strong downstrokes.

Samples ranged from near copy book form to disjointed, unusual handwritings. Various ways of categorizing these writings were undertaken. The first stage was to use a six-tiered typology developed by Ruth Holmes and Marc Seifer. Ultimately, these six types were combined into the following four categories of creative types.

- 1. Conforming Creative**
- 2. Conflicted/Compensated Creative**
- 3. Versatile/Productive Creative**
- 4. Empowered Creative**

Some of the subjects succeeded and overcame obstacles by compensating for their own personal insecurities and early traumas. Other subjects, usually those less conflicted, achieved their success through a combination of intelligence, stamina and versatility.

When the results were summarized, the word "creative" was substituted for "visionary" because it was the process, as identified in the handwriting samples, that contributed to the evaluation of this select group. Different levels of self-actualization were observed graphologically in the original stroke formations. From a psychodynamic point of view, all the creative types found a belief in themselves to manifest their ideas or visions. Courage, hard work and positive attitudes guided their direction.

The following examples will illustrate the four types of creativity discerned in the Visionary Project. Case histories although of necessity shortened, still provide background information for better understanding why these individuals were chosen.

PERSONALTY TYPE	CHARACTER TRAITS	GRAPHICS
Conforming creative	Traditional, conventional Logical/methodological Reluctant to risk Internal & external control Need to belong Underachieving	Copybook style Connected letters Controlled writing Straight baseline Form conscious Subtle signs of originality
Compensated/conflicted creative	Early trauma Internal confusion Inconsistency Variable self-image Escapist behavior Self-protective	Complex or distorted letter forms Variable slant Uneven middle zone Simplification Lower zone elaboration Extremes in shapes words, connections
Productive/versatile creative	Self-confident Motivated Mentally versatile Ambitious, bold Goal oriented Will power Initiative Resilient	Good zonal proportions Consistent middle zone Variety of forms & connections, Angular Rightward movement Powerful horizontals Rising baseline High Form Level Original style within traditional forms
Empowered creative	Self-actualized Good judgement Inner peace Spontaneous Authentic Autonomous, Independent Integrated Non-conforming	Simplified forms Ease of movement Original letters & Connections Uncomplicated spacing Balanced zones Excellent organization Highest Form Level

I. CONFORMING CREATIVE -- (Examples 1 & 2)

Conventional, conservative forms, often school copy script, with subtle original forms and letters, reflect intense energy used to exert both inner and outer control of the individual's more innovative facets. Both are women raised with high standards and expectations made upon them to conform to narrow patterns of thinking and behavior. In spite of the traditional form, the writings are active and forward moving, showing the writers' strong determination and innate ability to achieve.

Example 1. The writing of the founder of the Giraffe Project , a non-profit organization which recognizes people willing to stick their necks out for good causes. This project, named one of the 1,000 Points of Light during the Bush administration, was a way of giving recognition to those individuals who go out of their way to be helpful to others or their communities although they know there will not be any material reward.

Example 2. The writing of an art teacher and author of the books *Drawing with Children* and *Drawing with Adults*, who, without graphological training, teaches children to see everything in shapes: lines, circles, dots, curves and squares. The astounding results of her work would convince anyone that each of us has an artist within ourselves.

II. COMPENSATED/CONFLICTED CREATIVE -- (Examples 3 & 4)

Non-conforming, original and highly motivated. These individuals have achieved their goals through sheer determination and will power, by overcoming enormous childhood trauma. Their perceptions of life are unusual because of the hardships they have endured, and yet with tremendous fortitude, and a sense of humor, they have seized opportunity to become very successful in their own fields of endeavor. Graphologically, there are long downstrokes, lateral movements and variable strokes in the vertical and horizontal axes.

Example 3. The compensated writing of a Greek hotel entrepreneur whose close early connection to his mother and domination by his father has led him to a lavish lifestyle of entertaining in his position as a hotel proprietor and proud owner of a rare priceless and provocative British art collection in New Mexico.

1)

Oh I remember of what you said to me
 on the words "converted introvert" (which I don't ^{remember} ~~remember~~
 your saying to anyone else so they were all ^{own} ~~own~~ extroverts
 and "parentectomy" (and I don't know if you said I had
 had one or nuded one!).

CONFORMING CREATIVE

2)

clouds are peachy pink and white
 against a beautiful baby blue
 It rained last night and every
 is very clean and clear.

3)

Were you aware when you wrote
 in the "Guest Book" that I had
 in yet to come? What is to come
 or you just simply said it in future?
 And I tell you when you
 want to come, I'll send you a check
 for your fare whatever it is.

COMPENSATED/CONFLICTED CREATIVE

4)

separation with God. In my birth, the
 function of Death, is to return us to a
 world of spirit where we remember who
 we are.

Example 4. The writing of a film producer and screenplay writer whose early childhood development was arrested by extraordinary emotional, physical and psychological damage from the time of conception. In spite of all odds, his courage, talents and innovative thinking found the creative outlet by reworking his own life on film. He became the hero of his own productions triumphing over tragedy. Earliest memory was being chained outside with a dog with whom he tangled in a dispute over eating a woodchuck.

III. PRODUCTIVE/VERSATILE CREATIVE -- (Examples 5 & 6)

Astute, multifaceted, goal oriented and mentally flexible, these individuals have proven themselves in many areas of art, medicine, industry and education because of their ability to adapt, visualize with new perspectives and obtain results with enthusiasm and undaunted determination. The influence of their pasts seems to have been lessons more than traumas, so their powerful energies have been effectively captured and used productively. Their confidence has allowed them to use the resources available to them to become accomplished and well known.

Example 5. The writing of a New Age author and publisher whose books have been influential on a global level. Her mental alacrity and will power are sprinkled with her impatience with incompetence. Her considerable knowledge, wide network and activity have made her a major player in influencing personal and social transformation throughout the world.

Example 6. This hands-on, dynamic, practical, down-to-earth editor and writer has challenged political, medical and academic institutions in his extensive career of finding and reporting the truth. The ability to combine insight with common sense has made him a facile, outspoken master of multiple disciplines.

5)

Most of my handwriting
is notetaking, with a lot
of shorthand mixed in. -
This is a sloppy version

PRODUCTIVE/VERSATILE CREATIVE

6)

This exasperation ought to be
reflected in ~~stodai's~~ hand/brain/
how unenthusiastic with this ballpoint.

7)

I do hope you will get a break
when you go all go home to Boston - You
have truly deserved it! Give my love
to your parents too.

EMPOWERED CREATIVE

8)

My day has been a pretty easy one without too
many alarms and excursions. Philip wants my
undivided attention which of course he's not
receiving at this moment.

IV. EMPOWERED CREATIVE -- (Examples 7 & 8)

Psychologically independent, resourceful, simplified and often emotionally reserved, these individuals are the most self-actualized. They have dealt effectively with their pasts by comprehending and then clarifying their views of life. They are able to operate with directness, fluidity and keen intelligence to solve the most complex of human problems. The integration of intellect and action has led them to paths of wide understanding and gives them an unusual perspective in helping other people. The highly refined and complex process by which they move from intellectual understanding to plan of action is rarely understood and may be misinterpreted as emotional detachment or the quality of being remote or aloof. Their power rests in their inexplicable ability to "know without knowing" (intuition) as well as the way in which they serve selflessly. They epitomize the statement "the more you are, the less you need."

Example 7. This is the sample of a European-born therapist, writer and lecturer gifted with words, research ability and dedication to her field. Her personal experiences have made her an effective counselor and advocate of comprehensive therapy beginning with the earliest childhood trauma through the effects of the social consciousness and the environment on personality.

Example 8. The beautifully simplified writing of an innovative primal therapist who endured many years of childhood abuse. Her talent and insight, extraordinary intelligence and ability to see to the core of her patients has provided her a platform on which to base her lectures and the material from which to write a book.

As different and distinct as were the writings reviewed in the visionary research project, they all shared several identifiable features, including: vitality, keen intelligence, imagination, intuition, positive attitude and powerful inner strength. Graphologically, they tended to display good pressure, original letter forms and excellent spacing.

In short, each "visionary" on some level *knew* of their talents; they *felt* what it meant to have the ability and then they *owned* or took responsibility for their lives by using their gifts to achieve and then *shared* their insights with others. Perhaps this is the secret of the visionaries!

Note: The author wishes to express her appreciation to Marilyn Ferguson and her staff, Marc Seifer and Roger Rubin for their insights and assistance.

BIOGRAPHY: Ruth Elliott Holmes, president of Pentec Inc., is a certified handwriting examiner and personnel consultant. During her eleven years living in Europe and West Africa, she worked for the African-American Institute and taught English as a foreign language. With a B.A. in political science from Colby College, she is a member of the American Handwriting Analysis Foundation, American Board of Forensic Examiners, and founder and past president of the Great Lakes Association of Handwriting Examiners. With contributions to *Crain's Business*, *Corporate Detroit*, *Cosmopolitan*, *Allure*, *New Woman*, and *George*, she has also appeared on national TV on *CBS News* and on *Dateline NBC*.

* * *

GENEVE

Greetings from the International Congress for Graphology. It was a pleasure to receive your article and comments will be forthcoming.

Felix Klein.

LINDAU IM BODENSEE
Hafen

A post card from Felix Klein to Marc Seifer from Geneva, 1972.

IN MEMORY

This past year as I witnessed the passing of so many important graphologists: Felix Klein, Christian Dettweiler, Ed O'Neill, Marie Bernard, Elizabeth King and Elizabeth (Betty) Selmar-Delmar, I have also watched the struggle that Dr. Alan Levine and NSG editor Carole Schuler endured with the fading of their mothers. I have commiserated with Ruth Holmes because of the loss of her father who died just this past week, and experienced the death of my own father last July. An attendee of many graphology meetings, I have had the great fortune of seeing my dad, Stanley Seifer, in four vivid dreams whereby he appeared as a ghost, simply to tell me that he is all right in the new realm that he is now in. What importance does the event of death itself have for graphology?

Handwriting reveals in so many ways the very soul of a person, that elusive essence that is so often thwarted by fear and powerful inhibiting sociological factors. As one dies, the handwriting disintegrates as well. Thus, it is also a reflection of neurophysiological processes. From an evolutionary perspective, the production of handwriting is one of the most complex and advanced of human endeavors. A powerful research tool, handwriting analysis can be used in the creation of biographies, and in the understanding of people's personalities that have long since died. People live on in their handwriting. Parents, grandparents and great grandparents can be analyzed, and the dynamics of entire families can be understood.

At left, we see the handwriting of Felix Klein in his prime. What better window to his inner self could an analyst have? Note its open and fluid quality and the largeness of its middle zone.

All of these handwriting analysts, except for Betty Delmar, were in their 80's when they died. Betty was the first non-member of ASPG to have an article published in the journal (Vol. III). It was on the Wittlich Test. Past president of AAHA, Betty was well known in the mid-West for her work with the Chicago Police Department, her adult education courses and her books and pamphlets in the field.

Dr. Christian Dettweiler, of Stuttgart, Germany, was a Ph.D. in Pharmacology from the University of Rostock, 1942. One of his most recent lectures was presented at the British Institute of Graphologists' 1993 Symposium at Cambridge University. If the ego was defective, Dettweiler hypothesized, it could affect either the mind or the body. If it affected the mind, it could lead to the destruction of the personality and cause psychosis; or the stress, in the form of

repressed emotions, could attack the integrity of the body and cause psychosomatic illnesses including certain forms of cancer. Samples were included in his talk.

Marie Bernard, another German-born graphologist, established herself in New York two decades ago. A larger-than-life character with a somewhat mysterious past, Marie was known for her provocative lectures and theatrical style. Marie died of a stroke while speaking at a conference in St. Petersburg, Russia. Her works include *The Art of Graphology* and *Sexual Deviance as Seen in Handwriting*. Another mysterious graphologist, but for quite the opposite reason, was Elizabeth King, former editor of the *National Society of Graphology Newsletter*. An ardent introvert, graduate of Earlham College with advanced study in French and German at Northwestern University, Elizabeth was also an editor of textbooks and *Psychoanalytic Quarterly*. A full-time graphologist, Elizabeth earned her living working for corporations and for her numerous clients which she obtained from her ads in *Psychology Today* and the *Saturday Review*.

A graduate of Manhattan College with a Masters degree from Notre Dame in English, Ed O'Neill was one sharp graphologist. Having seen his lecture on margins at the Cranbrook Retreat conference in Michigan in 1986, I had asked Ed to write it up for the *Journal*, and he was working on this project at the time of his death. Ed's greatest contribution to graphology was in the numerous translations he did from the French, of such classics as those of Abbé Michon, Crépieux-Jamin, Max Pulver and Ania Teillard.

Vienna-born, Felix Klein was probably the most influential and beloved graphologist in the United States at the time of his death. His contributions, in my opinion, were predominantly inspirational, as he tried, to the best of his ability to carry on the European tradition to the numerous organizations around the country who were often overly rooted in the simplistic trait-stroke approach. It was Felix who did so much to advance and unify the field in America.

A survivor of Buchenwald concentration camp, having been released to England in June of 1939, just a few months before England entered the war, Felix came to the United States, and worked as a watchmaker until he began to establish himself in the field of graphology. He was founder and president of the National Society of Graphology. Ever the consummate graphologist, Felix Klein continued to provide handwriting samples of his signature just an hour before and an hour after having one of a series of strokes that soon ended him. We at the American Society of Professional Graphologists join the families and friends of these many graphologists in mourning their loss.

Marc J. Seifer, Ph.D.

THE SWISS NANNY CASE

Herry O. Teltscher, Ph.D.

ABSTRACT: Through a blind Gestalt analysis, some insightful personality characteristics were revealed in the handwriting of a lady accused of leaving a baby uncared for in a suspicious fire.

About a year ago I was approached by Ms. Joyce Egginton with the request for an analysis of a handwriting specimen, written in German by a young woman. Following her suggestion, I examined the specimen carefully, subsequently rendering my opinion about the personality of the writer, and I went into details to describe particular characteristics of the woman.

When presenting Ms. Egginton with all the data, she was amazed about the accuracy of my findings and she revealed that she had submitted to me a handwriting specimen that was given by Olivia Riner, the Swiss "Au Pair" who was accused in a recent case in which a baby left under her care died in a mysterious fire. After a trial, Ms. Riner was set free. Ms. Egginton, a New York correspondent of *The Observer* of London and a novelist, became interested in the case and wanted to publish the results of her detailed research in a book, asking my permission to incorporate my findings in her book -- to which I agreed.

Frankly, I had forgotten my analysis, when a few days ago I received a book in the mail, entitled *Circle of Fire: Murder and Betrayal in the Swiss Nanny Case* by Joyce Egginton, (William Morrow & Company, Publishers). In her book, she not only credits me (and another psychologist) for helping her to "put the pieces of the puzzle together" but she also publishes my analysis solely based upon the handwriting sample which she gave me.

CIRCLE OF FIRE

Joyce Egginton

Excerpt: Since Olivia declined to be interviewed for the book, some of her recent handwriting was shown to Dr. Herry O. Teltscher, the New York clinical psychologist, psychotherapist, and handwriting examiner with more than fifty years' experience in Europe and the United States.... No information was given to him as to her identity. He was told only that the writer was a twenty-year-old German-speaking woman. These were [some of] his comments: "My overall impression is of her rigid personality, that of a young woman who would find it easiest to work in a prescribed, structured situation. If she is interested in her job

she will do her best to manage. But secretly she rebels against some of the things she has to do. Outwardly she can be very friendly and polite, but what she expresses overtly, and how she really feels may be of a different order. For example, there is much anger which is controlled on the surface.

50846 Blick vom Torrenthorn
ob Leukerbad und Albinen
Wallis

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Trotz Kälte

Komm mit ins Wallis

Hoi Maya
 wir sind trotzdem
 gut zu Hause ange-
 kommen.
 Nur noch viele
 Grösse aus denker-
 bad und überarbeite
 Dich bloss nicht.
 Olivia

Figure 1. Key graphics which led to the analysis below included the left slant, left-tending concave double l's, line 2 and the separation between letters (pressure and isolation from the past); letters that end below the baseline with extreme pressure (anger and depression); the open O in the signature and the general pastosity of the writing (creativity, sensitivity and an impressionable nature).

"Her writing shows many signs of emotional insecurity. She frequently incurs feelings of rejection, and anxieties. It would be important to explore her relationship with her mother in infancy. As a child she may have felt rejected, and those feelings remained. Her writing indicates, furthermore, that she is depressed: It does not appear like a temporary mood, but seems to have existed for some time, particularly since she is outwardly controlled and fearful of articulating anger.

"She is the type of girl who will tell you only as much as she wants to tell. Basically, she keeps things to herself. Even though she is intuitive and possesses a certain amount of creativity, she has remained emotionally immature. Her emotional growth has not kept pace with her intellectual ability."

Still with no knowledge of what writing he was studying, Dr. Teltscher was asked: "Could this young woman's depression be profound?"

"I think it could be quite profound," he replied. "Especially when it is difficult for her to find a way out. Remember what I said about her rigidity."

"How would she try to find a way out? Suppose she was in a situation she couldn't tolerate."

"All of a sudden she is not twenty anymore. She is six. She would try to find an anchor in other people, because once again she has become a dependent child herself."

"What if there was nobody she could depend on?"

"If she had a creative outlet, somewhere she could put her creative energy, that might help her."

"And if that kind of outlet wasn't available to her?"

"If she was completely alone, and there was no one to turn to, I think she might do something desperate. There is this tremendous amount of inner anger."
(pp. 355-356)

BIOGRAPHY: Herry O. Teltscher, Ph.D., psychologist and psychotherapist. Specialties: grapho-diagnosis, questioned documents and court testimony. Fifty years experience in research and practice of graphology. Former lecturer on grapho-diagnosis at the Department of Psychiatry of Wayne University and the Department of Human Services of the state of New Jersey. Member of American Psychological Association, National Register of Health Services Providers in Psychology, New York State Psychological Association, National Association of Document Examiners. Former member of Military Intelligence of the War Department, Washington, D.C.; author of *Handwriting, Revelation of Self*.

A SCIENTIFIC APPROACH FOR RESEARCH IN GRAPHOLOGY

Thelma Imber Seifer

Paper presented before the Society, Swarthmore, PA, March 21, 1990

ABSTRACT: The success of any experiment in graphological research is no better than the pre-plan, design, method of approach, analysis, documentation and presentation of such data in a professionally accepted manner. This paper attempts to outline possible areas for graphological research, and also a strategy for presenting credible scientific findings.

INTRODUCTION

At the first meeting of the American Society of Professional Graphologists, we decided that research would be one of our primary goals. A research committee which I chaired, was organized to encourage scientific study, to discover inherent truths and to publish relevant findings in the Society's *Journal*. It is the goal of the research committee to encourage and help coordinate efforts to further such scientific endeavors. This paper has been written in order to help in that effort.

The purpose of our research is threefold:

- 1) To advance graphology nationally and internationally.
- 2) To gain increased acceptance in the scientific community.
- 3) To gain wider public recognition and utilization.

Research requires one to probe deeply and present facts and original ideas that demonstrate the validity of one's contentions or further proof of established theories. The following 10 steps are offered:

1. **FORMULATE** a concept of research.
2. **DELIBERATE:** Consider possibilities, hypotheses and counter-hypotheses.
3. **DECISION:** Narrow down to a manageable topic.
4. **GATHER** sufficient samples.
5. **EXAMINE** and extract published pertinent material.
6. **OUTLINE** your approach.
7. **ANALYZE SAMPLES** and apply scoring.
8. **EVALUATE** results.

9. **TEST** with additional random samples and with other colleagues.

10. **WRITE** standard form documentation for publication.

To design a research program, thoughtful observations are made in various areas of personal interest that would have worthwhile applications. Determine the component elements of the concept to be researched. When a broad topic is chosen such as addiction, it can then be narrowed down to more specific topics such as drug abuse, food disorders, smoking or alcohol abuse. How do these illnesses affect handwriting? Where do they stem from? Consider cause and effect.

If the topic was illness, for example, concentration on a particular ailment such as cancer would be suggested. Perhaps the researcher could attempt to replicate or elaborate upon Alfred Kanfer's work. Thus, the research could be further honed to specific types of cancer. Another avenue of research might be to correlate handwriting with current psychological thinking. Narrow probing to a manageable size.

The Theory or Hypothesis should be developed, and a preliminary topic expressed stating the ultimate goal. The researcher should eventually convert his findings into objective concepts that can be utilized by others and added to our graphological knowledge.

To gather background information, review what may have been done in the past on the subject. Evaluate this source material. Try to discard the outdated, trivial and irrelevant and then proceed to add substantiated new data, connections and synthesis.

Outline your approach making clear in a concise manner the unifying elements of your research. It may be a longitudinal study of handwritings of a person or family from early years to present time or a collection of handwriting of known persons with some particular attribute. For example, Patricia Siegel has made a study of left handed writers. Gather a sizeable representative sampling of 10 or more handwritings. When choosing a topic and seeking fresh handwriting specimens, you might start with a given paragraph to copy and then give the writer an opportunity for an original response to a particular question. You then have similar wording to compare with others, plus their response in their own words and expression.

Look for patterns, similarities, disparities and differences. Try to compile a profile of the important elements and significant characteristics they have in common. Quantify observations using the 40 indicators of the Psychogram or Thea Stein-Lewinson's measurements or a newly designed chart. Then select the specific appropriate ones and possibly weight them if they seem more important. Statistical quantification generally increases the scientific weight of the findings.

Score your samples and analyze results. Determine if they need

modification or if they are significant divergent differences. Does the profile or diagram show a meaningful measurable pattern? Have you uncovered something additional that you did not expect? Can you demonstrate your findings?

Design a control group and match it to a random group. Determine if you can duplicate your results with another sampling. Establish if other graphologists can reach the same results using your methods or with another approach. Use statistics, diagrams or graphs to show the significance of your findings. Identify the degree of variability (a standard range of plus or minus error). This gives integrity to the scientific approach. By these means you may prove or disprove your original premise, or it may lead you to further investigations. Don't ignore contradictory evidence. Embrace it. Explain to your readers the complexity of the topic you have chosen.

If the results are significant or even tentative, you might as a cautionary step, present them before a peer group. Discuss openly the problems and concerns that your research is generating. This type of dialogue may help clarify the situation, or generate new related ideas. If the results are accurate, objective and verifiable, they may be worthy to be prepared for publication. The report should be complete including abstract, headings, appropriate handwriting samples, graphs, statistics, development of the hypothesis, its significance, conclusions and a bibliography.

Current projects in our society include the topics of drug addiction, alcohol abuse, developmental problems and children's handwritings, determining integrity in handwriting, using the computer to simplify calculations, psychobiography, questioned documents and diagrams of the unconscious. Other areas of potential research might include: (1) different illnesses; (2) twins; (3) adopted children; (4) changing role of men and women; (5) obsessive-compulsive disorders; (6) stress and delayed stress; (7) brain dysfunction; (8) creativity and self-actualized writers; (9) psychohistory and psychobiography; (10) correlation or comparative studies with known current psychological tests or theories.

The success of any research task is only limited by our imagination.

BIOGRAPHY: Thelma Imber Seifer is an accountant, graphologist and handwriting examiner. With a Bachelor of Arts in Mathematics and Statistics and a minor in Psychology from Brooklyn College, Mrs. Seifer has certificates in Graphology from the New School For Social Research, (4-year program) and from Felix Klein's Advanced Courses in Handwriting Analysis. A member of the National Society of Graphology and the American Board of Forensic Examiners, she is also a charter member of both the National Bureau of Document Examiners and the American Society of Professional Graphologists.

INDICATORS OF SEXUAL ABUSE IN HANDWRITING

Suzy Ward

ABSTRACT: M. Martin has identified 34 atomistic variables found in individuals that have been sexually abused. This paper was an attempt to replicate and expand upon this research. Through the study of 76 known survivors of sexual abuse, a representative graphological profile was created by using a bar chart. This profile was then compared to non-victims and unknowns in order to test its predictive value. Key variables found in survivors of sexual abuse handwritings include misshapen letters, interior intrusions, poorly formed PPI and signatures and retracings in all three zones.

INTRODUCTION

The following research project was undertaken as a result of my interest in information received from a lecture on sexual abuse in handwriting. This lecture was presented by Marilyn Martin, a California graphologist. I could visualize that validating data of the type Martin presented could help not only achieve further respect for the validation of graphology, but could also contribute to the field of psychology as well.

Marilyn Martin studied the handwriting of 2000+ prisoners who had been diagnosed as having been sexually abused as children. Martin performed a complete analysis on each of the writing samples provided. There are hundreds of graphic patterns that can be distinguished from the study of handwriting. Martin found 34 of them that occurred very frequently in this population.

As Martin tended to take an atomistic approach, many global graphological traits such as organizational ability, rhythm, spontaneity and form level were not addressed. Other graphic patterns did not make the list because they were overlooked or because they were not seen in any overwhelming way in these samples.

One of the chief problems in undertaking any type of study that attempts to identify individualized characterological "signs" in handwriting is relating them back to the whole.

GRAPHOLOGICAL INDICATOR CHART FOR SEXUAL ABUSE**CONFUSED LETTERS**

- ☐ a for o
- ☐ b for p
- ☐ others

CONNECTING STROKES

- Arcades
- ☐ broad
- ☐ narrow
- ☐ umbrella (covering) strokes
- Garlands
- ☐ drooping
- ☐ rockers
- Angles
- ☐ sharks teeth

PRINTED LETTERS IN CURSIVE

Small letters

- ☐ b
- ☐ others

Capital letters

- ☐ K
- ☐ others

RETRACED STROKES

Flames (partially retraced at tips)

- ☐ in UZ
- ☐ in LZ

Lower zone

- ☐ p
- ☐ g
- ☐ y

Middle zone

- ☐ m, n, h, k
- ☐ e's
- ☐ c, o, d

Upper zone

- ☐ l, h, k, b, t

ISOLATION (wide spaces between)

- ☐ letters
- ☐ words
- ☐ margins

LEFT TREND

- ☐ narrow left margin
- ☐ within words
- ☐ at ends of words

DISTORTED LETTERS

- ☐ m, n
- ☐ p, g
- ☐ f
- ☐ others (ovals place below)

UNDEVELOPED LETTERS

(formless, weak pressure)

- ☐ s, p, b
- ☐ others

OVAL LETTERS

- ☐ overinvolvement, interior loops
- ☐ intruded
- ☐ pinched
- ☐ figure 8's (not in PPI)

ZONES**UPPER ZONE**

- ☐ emphasized
- ☐ non existent
- ☐ t & d stems foreshortened
- ☐ h, b & l stems foreshortened

MIDDLE ZONE

- ☐ height varying
- ☐ height increasing in size
- ☐ height decreasing in size: high FL
- ☐ height decreasing in size: low FL
- Closing of normally open letters

- ☐ c, z
- ☐ u, w

LOWER ZONE

- ☐ entangling with line below
- ☐ excessive, out of proportion
- ☐ elaborated
- ☐ stopping way below baseline in
downturn arcade (smiling depression)
- ☐ truncated

MARGINS

- __ non-existent right
- __ non-existent left
- __ unbalanced left margin
- __ decreasing right margin
- __ increasing right margin

TRIZONAL DYNAMICS

Unusual LZ or MZ connection to UZ

- __ in low FL writing
- __ in high FL writing

- __ poor
- __ balanced

RIGIDITY/SPONTANEITY

- __ rigid
- __ precise letter formations
- perfectionism

NARROWNESS

- __ within words
- __ between words
- __ within letters
- __ particularly the e

INITIAL STROKES

- __ present
- __ rigid
- __ starting below baseline

SIGNATURE

- __ poorly executed/illegible
- __ first name larger than last
- __ last name larger than first
- __ other

PPI (Personal Pronoun I)

- __ reverse forms (counterstrokes)
- __ isolated
- __ extremely small
- __ L-PPI overly large
- __ U-PPI inflated

SLANT

- __ extreme right slant
- __ extreme left slant
- __ upright
- __ inconsistent

RHYTHM

- __ rhythmic/metered
- __ arrhythmic/irregular
- __ unnatural breaks between letters
- __ particularly m or n ending below BL

SOLDERING

- __ pseudo-connections

PATCHING

- __ excessive corrections

VERTICAL STROKES

- __ emphasized

LATERAL STROKES

- __ emphasized

t-bars

- __ bowed
- __ long
- __ short
- __ before stem
- __ after stem
- __ above stem

- __ low set

i-dots

- __ low set
- __ high set
- __ circled

- __ other

SPEED

- __ fast
- __ moderate
- __ slow

PRESSURE

- __ heavy
- __ light
- __ uneven

FORM LEVEL (FL)

- __ high
- __ moderate
- __ low

Addressing the problem of relating the part to the whole, Max Pulver describes the process as "clearing away different layers of a psyche in order to reconstruct impartially the total character with the uncovered elements. [The handwriting analyst] is a translator of movements, an interpreter of visual forms." Pulver tells us that each symbol or pattern uncovered may have contradictory elements to it. Realizing all of this, the present study attempts, from an empirical point of view, to replicate and expand upon Martin's study, to identify, clusters of distinguishing atomistic graphic "signs" or movement patterns in individuals who have, during their childhood, been sexually abused. For the most part, the supposed psychological counterparts to such "signs" have not been identified, nor have these particular patterns been analyzed with respect to global features. However, a holistic perspective has been undertaken from the empirical vantage point by creating a bar chart which represents in a statistical way, the general graphic pattern of these individuals with respect to the 43 indicators used.

It is my hope that with validation of this study, a new tool will emerge to promote testing in other areas. The format of this study could also be used to identify other populations such as alcoholics, drug abusers, people with various eating disorders, artists, business executives, sex offenders and so on.

HYPOTHESIS

My purpose in undertaking this pilot study is to attempt to prove that: There is a statistical probability that an individual who is a survivor of sexual abuse can be identified from specific analysis of his or her handwriting.

METHOD

Martin's list of 34 most frequently found psychomotor patterns or "signs" of sexual abuse were used as the starting point. In addition, 13 more variables were added based upon psychoanalytic criteria, the findings of other researchers and personal experience. After analyzing 55 samples of professionally diagnosed acknowledged survivors of sexual abuse, for these 47 indicators, 4 were found to be insignificant to the profile correlation. Their infrequent occurrence, was the main reason for their elimination from the final list. Thus the list was reduced to 43 graphic indicators, 32 from Martin's original list and the following additional 11 indicators from my research: 4,5,10,11,21,23,24, 26, 31, 33 and 40 (see chart below).

In looking over the list, some repetition may be noted. Further, some variables are less specific than others, form level was not taken into account, and very few relate directly to global characteristics. It was for this reason that the

Master List, above, was created by myself and Marc Seifer. This report, which should be read as a "work in progress" is based upon the 43 indicators listed alphabetically below.

The data base consisted of 76 known survivors' samples. As each individual's handwriting stands alone, a few of these samples were less complete than others and did not strongly correlate with the survivor profile. Nevertheless, they were included to ensure representation of the total population. This pilot study was based upon the analysis of these 76 survivors of childhood sexual abuse, the handwritings collected in a confidential manner from five trained psychologists and counselors. Based upon this research, a profile bar chart of shared graphic indicators has been established. See Graphs 1 and 2.

This study is now in phase two, which consists of the collection of samples of non-victims for a control group, Graphs 7 and 8, and also "unknown" individuals. Once the writings are measured, they are compared to the survivor of sexual abuse profile. As a test to this theory, a third group of 11 "unknown" individuals was collected. These were presented by several therapists. Based upon this procedure, I have been able to separate the victims of sexual abuse from the non-victims in all 11 cases. While this does not prove validation of the method, it is encouraging. Many more samples are needed to lend confidence to this method, similar variables need to be combined and global characteristics need to be identified and integrated.

RULES

Rules for scoring frequency and relative strength of appearance of each indicator is as follows:

SCORE	DESCRIPTION
0	if not found or found only once ("by accident") on a page
X	if found 1-4 times per page
XX	if found 5 or more times per page
XXX	if found frequently on a page

When in doubt, the lower score is always given.

Each indicator has been assigned a color code and when present marked appropriately on the sample; then, a score of 0 - 3 is entered into the computer statistics program. A correlation coefficient of the sample scores to the mean values is calculated based on a comparison to the mean profile of the known survivors. Graph 2 represents the sexual abuse survivor total profile. This is the standard measure that is compared to any new handwriting. By using bar charts, excellent

visual comparisons can be made, along with mathematical statistical correlations. See graphs 3 - 8.

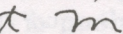
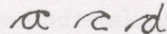
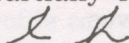
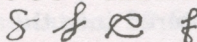
GRAPHIC INDICATORS FOR SEXUAL ABUSE

Please note: some abbreviations have been used:

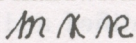
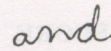





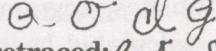
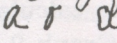
PPI = personal pronoun I.

L-PPI = left lateral loop on PPI.

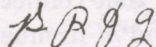
LZ, MZ & UZ = lower zone, middle zone and upper zone.

1. **a confused for o** -- or visa versa.
2. **Arcade -- broad.** These could be found within letters such as m's and n's, as arched t-bars, in connecting or end strokes: 
3. **Baseline -- abnormal.** Baseline may descend excessively, be irregular, vary, be convex or concave or ascend excessively.
4. **B -- printed** in cursive writing.
5. **Covering strokes** -- extended beyond the base of the letter: 
6. **Crowded spacing** -- between letters, words and lines; signs of compression.
7. **Capital letters inserted** -- in inappropriate places. The letter k, in particular, printed in cursive -- or out of proportion to rest of the writing.
8. **Drooping garlands** -- below the baseline.
9. **Flames** -- upper and lower zone loops with well defined, partially retraced flame-shaped points: 
10. **Figure 8's** -- and fluid strokes (not in PPI): 
11. **Isolation** -- very wide space between words, lines or margins. Isolation of PPI.
12. **Left trend** -- narrow left margin, LZ



and ending strokes pulled leftward, letters tied or finished to the left, lack of finals to the right, movement within letters counter to copybook.

13. **LZ deviation from copybook**, e.g., tangling of lower loops with line below; any indicator in the LZ which is unusual or distorted. LZ excessive or out of proportion to rest of handwriting.
14. **m's and n's disorted:** 
15. **Margins unbalanced** or non-existent; uneven, decreasing or increasing.
16. **MZ inconsistent** in size. Height of MZ letters vary.
17. **MZ increasing** in size: 
18. **MZ decreasing** in size: 
19. **MZ/LZ to UZ -- any unusual connections** from MZ or LZ to UZ:
20. **Ovals -- looped.** Overinvolvement within circle letters: ; initial loop within ovals: ; final loop inside a circle letter: ; double loop within circle letters: .
21. **Ovals -- intruded:** 
22. **Ovals -- pinched/retraced:** 
23. **Precise letter structures** -- perfectionism, rigidity. Consistency in

all areas, even spacing, even margins, patching, rhythm, lower UZ, artificial balance (through equality) of three zones, persona writing.

24. p and g -- distortions: 

25. p -- retraced stem.

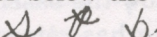
26. PPI -- deviation. Horizontal figure 8 creation on L-PPI; reverse forms and counter strokes:  ; other deviations: 

27. Retracing in MZ such as in m's, n's, h's, k's.

28. Restricted movements -- extreme narrowness within looped letters such as e's.

29. Retracing in UZ excessive: 

30. Rigidity of initial strokes -- inflexible copybook initial upstroke originating at or below the baseline:

31. Rockers -- 


32. Signature or PPI poorly formed -- illegible or weak -- and other signs of poorly formed letters.

33. Slant -- excessive. Extreme right or left slant.

34. Slant -- inconsistent. Slant varies considerably.

35. Stroke at end of letter ending below line -- particularly in m or n:


(Do not measure ending strokes here.)

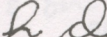
36. Stopping below baseline of lower zone loops -- arcaded turning down of endstroke on lower zone forms: 

37. Soldering -- corrections, patching, retouching, excessive corrections.

38. t and d-stems foreshortened -- less than two times size of MZH.

39. t-bar bowed -- convex or concave:

40. Top of c's and z's closed -- or extremely narrowed or distorted: 

41. UZ excessive: 

42. UZ -- non-existent or extremely undeveloped.

43. Underdeveloped, uneven pressure, soft, formless letters -- particularly in the s, p or b.

ANALYSIS

There are six samples presented, 4 known survivors of sexual abuse and 2 known non-victims. Their charts appear at the end of the report. The first two samples are scored for the entire list for each variable present. Because of space considerations, the last four samples discuss just a few representative variables. All samples provided herein are used with permission.

We begin with the first chart for Figure 1.

INDICATOR	STRENGTH	DESCRIPTION
		LINE
2. Arcade - broad	XX	5: <i>n</i> in applying; 8: upper zone connection in <i>of</i> , twice 18: second <i>m</i> in museum, <i>h</i> in symphonies
4. <i>b</i> printed	0	Note: One printed <i>b</i> was present on her questionnaire. It is marked as present, but receives a score of 0.
5. Cover strokes	XX	4: <i>o</i> in <i>to</i> ; 8: <i>o</i> in first <i>of</i> ; 14: <i>o</i> in <i>on</i> 18: left-tending endstroke of <i>o</i> in <i>symphonies</i>
10. Figure 8's	XXX	2: t-bar connection in <i>to</i> ; 4: t-bar connection in <i>to</i>
12. Left trend	XX	No left margin (difficult to see here). 3: <i>w</i> of <i>know</i> ; 5: <i>f</i> ties to left in <i>for</i>
13. Lower zone deviations	XX	3, 5, 7, 8, etc. enlarged lower loops; note also many connect below the baseline
14. <i>m</i> and <i>n</i> distorted	XX	1: <i>n</i> in <i>handwriting</i> has retracing 21: <i>m</i> in <i>swimming</i> has retracing
15. Margins unbalanced	XX	No left margin, uneven right margin
16. MZ inconsistent	X	5. Almost non-existent <i>o</i> in <i>of</i> . 9. First word, first letter smaller as entire word increases in size 10. Large <i>c</i> in <i>fiction</i>
18. MZ decreasing in size	X	Slight tendency in a few words 7. <i>In</i> 10. <i>fiction</i> twice
19. Unusual connections to UZ	XX	Seen repeatedly in the word <i>of</i> .
20. Looped ovals	XXX	2: <i>a</i> in <i>sample</i> ; <i>o</i> in <i>your</i> 6. <i>o</i> in <i>job</i> and <i>or</i>
21. Ovals intruded	XX	4. <i>a</i> and <i>o</i> in <i>about</i> 6. <i>o</i> in <i>to</i> , <i>a</i> in <i>a</i> .
24. Deviations in g's and p's	XX	5. <i>g</i> in applying, looped low 5. <i>p</i> stunted in same word
25. Retraced p-stem	XX	5. <i>p</i> 's in applying, retraced

1 Well, here is my handwriting
2 sample, & I'm glad to help you in your
3 research. I don't really know what
4 to write about, but I'll do my best.
5 I kind of feel like I'm applying for
6 a job, or writing to a pen-pal.
7 In my spare time, I do a lot of
8 reading of a lot of different types of
9 books. I love mysteries, intrigue,
10 science fiction, as well as non-fiction
11 & biographies. I love to write poetry
12 & short stories, & I like to draw. I
13 also spend a lot of time with my
14 dog, taking her out for walks & on
15 hikes up in the mountains. She
16 enjoys it so much. I like doing kind
17 of cultural things, like going to the
18 art museum & to symphonies. Boy,
19 as I'm writing this I'm realizing
20 that I like quite a few things. I
21 like tennis, swimming, racquetball,
22 bike-riding, hiking, watching sunsets.
23 I really enjoy being out with nature.
24 The big love of my life, though, is
25 the ocean. I was born & raised only
26 2 miles from the ocean, in Southern
27 CA, so I had the influence of the

Figure 1. Female, right-handed, 36 years of age. This individual has two years of college and works in computer graphics and word processing. She was sexually abused by the father from ages 3 - 7. She has had individual and group therapy.

INDICATOR	STRENGTH	DESCRIPTION
		LINE
26. Deviation of PPI	XXX	3. Cap I's have "flaming" at top. 9, 12. Restricted lower part, etc.
27. Retracing	X	5. <i>k</i> in <i>kind</i> 11. Connection between <i>w</i> and <i>r</i>
28. Restricted Narrowness	XX	2. Cap I. 16. <i>e</i> of <i>like</i> .
29. Retracing in UZ	X	5. <i>k</i> in <i>like</i> 12. <i>h</i> in <i>short</i> 17. <i>h</i> in <i>things</i>
30. Rigid initial strokes	X	15. <i>S</i> in <i>She</i> . Her initial strokes are short and do not extend below baseline so only a slight tendency is marked.
31. Rockers	XX	12. <i>s</i> in <i>short</i> , etc.
32. Poor self image	XXX	In general, very weak PPI's.
38. Forshortened t- and d-stems	XXX	1. <i>d</i> in <i>handwriting</i> 10. <i>t</i> in <i>fiction</i> , etc.
39. Bowed t-bar	XX	All of them are slightly bowed.
40. Closing of c & z	X	16. <i>c</i> in <i>much</i>
42. UZ non-existent	XX	1. <i>handwriting</i> , etc.
43. Soft p, s or b	XX	5. Light pressure on first <i>p</i> of <i>applying</i> 11. Light pressure on <i>p</i> in <i>biography</i>

Figure 2. Female, right handed, 39 years old. Four years of college, presently, a data entry clerk. She was sexually abused by an adopted father from a very young age until approximately age 10. Two samples of her writing are provided below.

INDICATOR	STRENGTH	DESCRIPTION
		LINE
2. Arcade - broad	XX	1. <i>D</i> in <i>Dear</i> 3. <i>a</i> in <i>cats</i> 14. <i>o</i> in <i>of</i>
3. Baseline - abnormal	XX	2, 3. Convex baseline 9. Note <i>with</i> rising
5. Covering over strokes	XXX	2. <i>o</i> in <i>some, of</i> 4. <i>o's</i> and <i>d's</i> in <i>old, old, and</i> 14. <i>a</i> in <i>a</i>

1 Dear Suzy,
 2 Am enclosing some pictures of
 3 our 3 cats. Kitty is 4-4½ yrs
 4 old, Butternutt is 3 yrs old and
 5 Silver is about 2 years 3 months
 6 I will send you more pictures
 7 and some close ups later. ~~I~~
 8 I am also enclosing a picture
 9 of Dad with Take
 10 at be shopping
 11 Center when 1 biography can
 12 out. We purchased a copy & had
 13 autograph it to Dad. Also
 14 enclosed is a copy of the news-
 15 paper article on Dad in Nov. 198
 16 Love
 17

Figure 2. First sample.

INDICATOR	STRENGTH	DESCRIPTION
		LINE
9. Flames	X	14. <i>p</i> in <i>copy</i> 24. <i>y</i> in <i>every</i>
10. Figure 8's	XX	6. <i>c</i> in <i>pictures</i> 12. <i>a</i> in <i>purchased</i>
12. Left trend	XX	3. <i>y</i> of <i>Kitty</i> 5. Ending of <i>Silver</i> 23. Ending <i>r</i> in <i>year</i>
13. LZ deviations & entanglements	XXX	Lines 2, 6, 10, etc, lower loops entangle with line below.
14. m/n distortions	X	5. <i>m</i> in <i>months</i> directional pressure at end 28. <i>n</i> in <i>return</i>
15. Margins unbalanced	XX	Writer has little or no margins and rights through ruled margins on lined paper. (Lines not apparent in this copy.)
16. MZ inconsistent	XXX	MZ varies from 2mm to 5mm
17. MZ increasing	XX	5. <i>m</i> in <i>month</i> 28. <i>n</i> in <i>normal</i>
18. MZ decreasing	XX	7. <i>later</i> 8. <i>picture</i>
20. Ovals looped	XXX	2. <i>o</i> in <i>enclosing</i> , some 19. <i>o</i> in <i>slow</i> , etc.
21. Ovals intruded	XXX	4. <i>a</i> in <i>and</i> 12. <i>a</i> in <i>a</i> , <i>d</i> in <i>had</i> 23. <i>o</i> in <i>of</i>
24. P/g distortions	XXX	2. <i>g</i> in <i>enclosing</i> 24. Every <i>g</i>
25. Retraced p-stem	XX	13. <i>autograph</i> 20. <i>Reprints</i>
26. PPI distortion	XX	8. Lower structure out of proportion
27. MZ retracing	XXX	2, 8, etc. <i>m</i> 's and <i>n</i> 's
28. Narrowness	XX	20. <i>e</i> in <i>goodies</i> 22. <i>e</i> in <i>everyone</i>
29. Retracings	XX	5. <i>t</i> in <i>about</i> 9. <i>t</i> in <i>with</i>
30. Rigid initial strokes	XX	3. <i>c</i> in <i>cats</i> 32. <i>g</i> in <i>gifts</i>
31. Rockers	XX	26. <i>p</i> , <i>f</i> and all the <i>s</i> 's

18 Dear Suzy,

19

20 Sorry to be so slow in sending
21 your Christmas goodies, but repairs
22 took awhile and I had to wait
23 on more Zoo calendass. Hope everyone
24 has a wonderful new year full of
25 every good & wonderful thing imaginable.

26

27 I had a good Christmas, but
28 was depressed before Christmas got
29 here. I am glad the holidays are
30 over and things can return to normal.

31 Mother and I have been getting along
32 much better since we talked before

33 Christmas. She came down before
34 Christmas and picked out my gifts to
35 be sure they fit. Bill and I still have
36 many, many differences to work out.

37 Just between you and ~~me~~ me, I'm
38 afraid it won't be possible, but I'm

Figure 2. Second sample.

INDICATOR	STRENGTH	DESCRIPTION
		LINE
32. Poor PPI	XX	6,7,8,21. Note cross-out of I on line 7.
33. Excessive slant	X	33. y in <i>they</i>
34. Inconsistent slant	XX	lines 22-34 show great variation
35. m/n ending down	X	32. n in <i>and</i> 36. m in <i>I'm</i>
37. Soldering or patching	X	20. <i>you're</i> 25. <i>ma</i> in <i>Christmas</i>
38. Forshortened t/d	X	4. One t in <i>Butternut</i>
39. Bowed t-bar	XX	Some can be seen throughout.
40. Closure of c/z	XX	1. z of <i>Suzy</i> 2. c of <i>enclosing</i> 11. C of <i>Center</i>
43. Underdeveloped s/p/b	XX	10. p in <i>shopping</i> have tremors 32. s in <i>Christmas</i> soft, and rounded

1 ¹⁹⁸⁷ Today
 2 and I
 3 interviewed Mrs. ~~our~~
 4 for ~~the~~
 5 5th Grade News
 6 Paper

7 I made a mistake
 8 1987 should be this

9 Today we are
 10 getting ready for
 11 Mommy's & Daddy's
 vacation.
 12 We are going to
 13 stay at both
 14 Grandma's (grand-
 15 ma Bane, grand-
 16 ma Fouch)

Figure 3. Female, right handed, age 11. Severe case of incest perpetrated by the father. Note the covering overstrokes in the d's a's and g's, (Variable 5); intruded ovals (Variable 21) of these same letters; and extreme closure of the c in the word vacation, line 11 (variable 40).

3 With the help of Bill, my friends & my
 4 children I ^{am} ~~will~~ get through this. Part of
 5 my reasoning ~~was~~ ^{was} confronting you
 6 with my knowledge of what happened
 7 and what you did and did not do. What
 8 I needed at the time was support,
 9 understanding and protection from
 10 further harm by DuDee. What I would ^{would be}
 11 ^{helpful now} like now is a simple apology. I'm
 12 ~~don't~~ saying this to hurt you, it's
 13 just that the time has come to speak
 14 the truth. If you would be more comfortable
 15 pretending you have read this letter, I
 16 will understand. ~~because you couldn't~~
 17 ~~deal with these facts when they occurred,~~
 18 it is likely that ^{these events} they are still very
 19 difficult for you to confront. If you
 20 would like to talk about it I would
 21 be willing, but only to help you understand

Figure 4. Female, right handed, age 43. This lady is a Ph.D. psychotherapist, who was incested by her father, with the memory surfacing two years after this writing. Note the printed b, lines 10, 16 and 21 (variable 4); distortions on m's and n's on line six on the words my knowledge, (variable 14); unusual MZ to UZ connections between o and t in protection, line 9 and ou connection, line 20 (variable 19); and intruded ovals, the a's and one d in line 7, a in at, line 8 (variable 21).

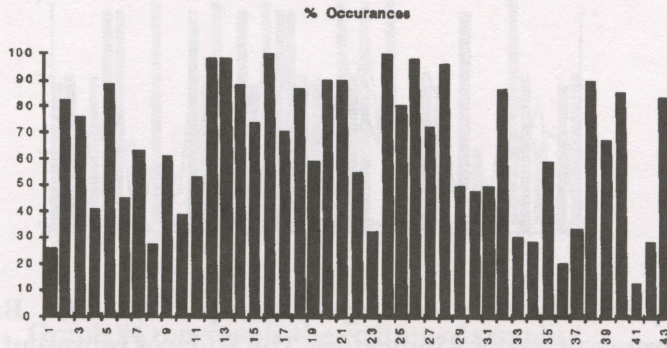
3 The spring snow is Thick on the ground - I love
 4 Spring snows - wet and heavy - The air is crisp -
 5 and every thing smells new and clean -
 6 On days like today - I am reminded of
 7 The Québec winters and springs - When May
 8 rolled around I was only too ready to put away
 9 my heavy winter coat and Thick rubber boots -

Figure 5. Female, right handed, college graduate, age 40. This is the writing of a **KNOWN NON-VICTIM**. We note broad arcade connections, such as the *on* connections on line 3 (variable 2); printed *b*'s, line 9, drooping garlands, between the *i* and *t* in *writers*, between *e* and *n* in *when*; and a deviation on the *p* of *put*, line 8, but these are not heavily emphasized, and, most importantly, the overall pattern is very different than the survivor profile. See Graph 5.

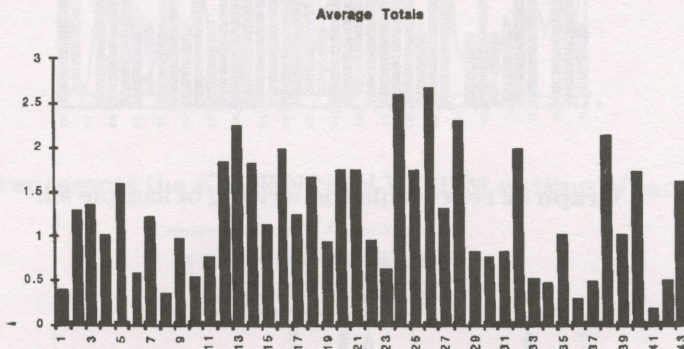
1 I just noticed that my margin
 2 is smaller on this sheet than it was
 3 on the 1st page. At least it started
 4 out that way. The trouble with being
 5 an analyst is that self analysis always
 6 keeps cropping up.

Figure 6. Female, right handed, age 60. M.S. in chemistry, retired convent school principal and graphologist. **KNOWN NON-VICTIM**. Note retraced *t*'s, (variable 29); and pinched, retraced *a*'s in the words *least* and *started*, line 3 (variable 22). However, most features do not match the survivor profile. See Graph 6.

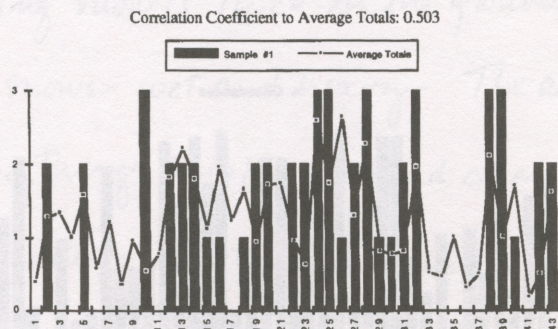
STATISTICS



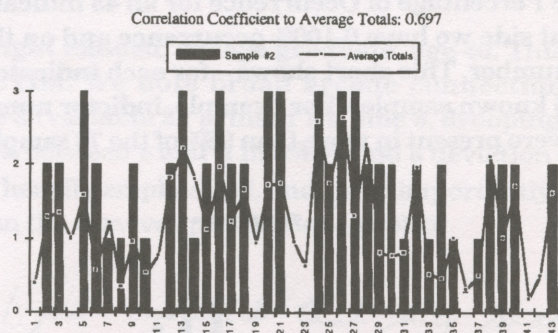
Graph #A shows the Percentage of Occurrence for all 43 indicators in the samples studied. On the right side we have 0-100% occurrence and on the lower side, each indicator listed by number. This chart shows -- for each indicator -- the percentage it occurred in the 76 known samples. For example, indicator number 12, 13, 16, 24, 26 and 28 occurred or were present in more than 96% of the 76 samples.



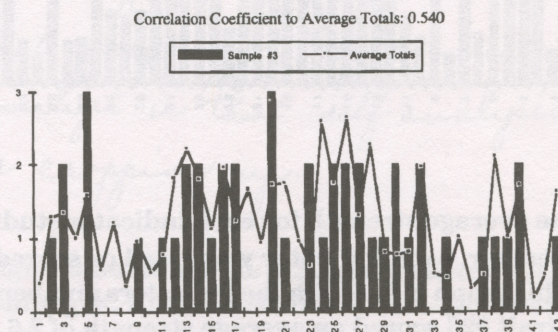
Graph #B reveals the average strength for each indicator studied and represents our PROFILE. Remember, each indicator was rated or scored on a scale of 0 - 3. Note the left side of this graph is 0 - 3 with the indicators numbered across the lower edge. For example, trait #26 scored an average strength of 2.6 for the 76 samples. So, this indicator was usually strong in each sample in which it was present.



Graph #1 represents the writing of sample #1. The Bars represent strength/occurrence of writer's indicators. The Squares represent the average for each variable of all the "survivor profile" indicators.

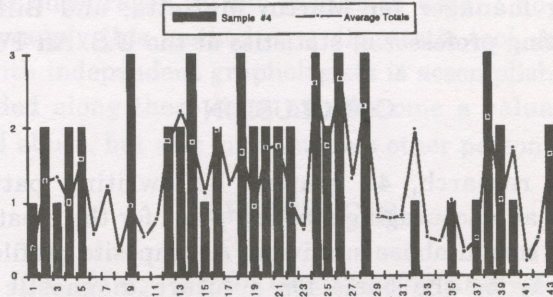


Graph #2 represents the writing of sample #2.



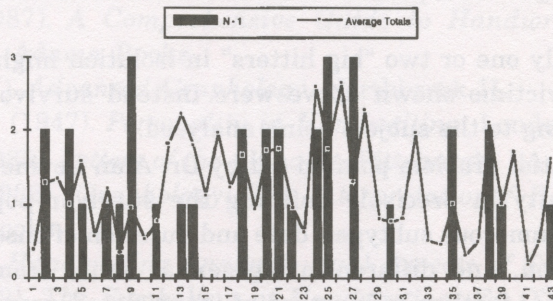
Graph #3 represents the writing of sample 3.

Correlation Coefficient to Average Totals: 0.746



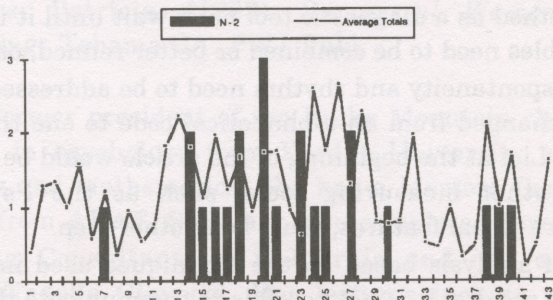
Graph #4 represents the writing of sample 4.

Correlation Coefficient to Average Totals: 0.285



Graph #5 represents the KNOWN NON-VICTIM writing of sample 5.

Correlation Coefficient to Average Totals: 0.294



Graph #6 represents the KNOWN NON-VICTIM writing of sample 6.

Consultants for the statistics in this project are Bill Ward, my husband, software engineering manager for Martin Marietta, and Bill Ryan, Ph.D. in mathematics and visiting professor of statistics at the U.S. Air Force Academy.

CONCLUSION

Through this research, 43 graphic handwriting patterns have been uncovered which form an encouraging starting point for the creation of a definitive handwriting profile of sexual abuse survivors. A composite profile, such as the one seen in Graph A, may be the basis for a future diagnostic tool. Non-victim correlations vs. survivor correlations to the profile have, so far, been shown to be very different. Several indicators occur in virtually all survivor samples with corresponding strong statistical scores. But these data must be viewed as a whole. The presence of an individual indicator, or just a few indicators, no matter the strength, is inconclusive as to its relationship to sexual abuse. The statistical stability of correlating with a profile of 43 indicators vs. 1 or 2 indicators is an important factor.

Looking at only one or two "big hitters" in isolation might lead an analyst to say the two non-victims shown above were instead survivors. This could be particularly devastating to the subject being analyzed.

Another potential problem pointed out by Dr. Alan Levine, in reviewing this article, is the difficulty in precisely defining the survivor population vis-a-vis sexual abuse and its numerous subtypes, date and duration of onset, with or without penetration, and so on, and differentiating sexual abuse from physical and/or emotional abuse. Thus, further refinement of interrelated groups and subgroups should probably be undertaken in future studies. Nevertheless, all of the individuals in this study were diagnosed by competent professionals, and also, all of them acknowledged this abuse.

Use of this method as a diagnostic tool must wait until it is better perfected. Certain graphic variables need to be combined or better refined, other features, such as pressure patterns, spontaneity and rhythm need to be addressed, and the order of variables, should be changed from an alphabetical code to one that groups similar indicators. The Master List at the beginning of the article would be a first step in this direction. Utilizing other measuring tools, such as the Psychogram, which addresses itself to more global features, could be another step.

Consistency of analysis based on the techniques used in the study is still necessary to duplicate results. It is not possible to communicate these techniques in sufficient detail in an article such as this to achieve repeatability. Verification of the method using blind testing, the more comprehensive list and further statistical

analysis is yet to be completed.

While I am encouraged by the results to date, I do not recommend that anyone attempt to apply this method as a diagnostic tool. As further, refinement and verification with independent graphologists is accomplished, I am hopeful that a procedure founded along these lines may become a valuable tool, not only for survivors of sexual abuse, but also for numerous other personality types.

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BIOGRAPHY: Former president of the Rocky Mountain chapter of AHAF, Suzy Ward has a B.S. in psychology from Purdue University with triple minors in biology, chemistry and mathematics. She has a Masters Certification from IGAS and certification from AHAF. Suzy has also completed three graphology courses from Handwriting Consultants of California and one course in questioned documents from Nadelle Claypool. Her lectures include presentations of this research at the 1990 COGS Ohio convention, 1991 AAHA conference in Chicago and the 1992 AHAF/AAHA conference in Denver.

BOOK REVIEW: *The Symbolism of Handwriting: Structural Graphology and the Unconscious*. By Paulo Bruni, Xenia Edizioni, Milan, Italy, 1994. 368 pages in Italian, 35,000 lire (about \$25).

Paolo Bruni's text clearly and convincingly argues that some ideas which graphologists have universally accepted as fact are actually without merit. Having challenged the very foundation of this science, he suggests new pathways for handwriting research to follow.

Affiliated with the Italian Graphological Association, Dr. Bruni bases his book on a decade of research. His wide-ranging, complex work provides important insights into both the theory behind the symbolism of graphic space and the interpretation of numerous basic graphic signs.

Dr. Bruni begins with an epistemological break from M. Pulver's system of reference. In other words, he identifies the unconscious with the baseline rather than with a deep lower zone. The consequences of this change are extraordinary.

Approximately one-third of the book serves as an introduction that explores the world of the unconscious, and the dual and triangular relationships within the nuclear family. Another third is devoted to symbolic understanding of the structural and structuring elements of handwriting. Indeed, the book's subtitle, "Structural Graphology and the Unconscious," refers to this portion of the book which also includes an analysis of the organization of graphic space. By redefining and reinterpreting graphic space, the author investigates the meaning of the individual letters of the alphabet.

The book then offers an explanation of approximately 50 graphic signs, which are also examined in terms of Dr. Bruni's new concepts of graphic space: e.g., margins, size, letters and line spacing; also: letter connections, slant, upstrokes and downstrokes (extended or shortened), the different types of circular stroke (fortified, narrowed, double-walled) and, interestingly, the clockwise-rotating circular stroke, which young people in Italy use frequently today.

The book concludes with an important discussion of the difficulties faced by young people in today's world (e.g., consumer society, influence of the mass media, the artificial reality created by computers), reflections of which can be seen in their handwriting. He is not writing for graphologists and handwriting analysts alone. His book is designed for anyone whose work has a psychological or social component, a group which naturally includes psychotherapists, teachers and, of course, free thinkers.

Sante A. Bidoli

Originally published in *Attualita' Grafologica*, quarterly journal of the Italian Graphology Association, April-June 1994. (Article condensed.)

ALCOHOL ABUSE THERAPY & HANDWRITING

E. Edward Peeples, Ph.D., and George Bishop

ABSTRACT: Adult alcoholics in psychotherapy wrote a paragraph on unlined paper. These handwriting samples were compared to those from sex-age matched controls. Fifteen handwriting characteristics in each sample were measured using a digitizing tablet connected to a personal computer. Seven of the fifteen measurements were significantly different between the two populations. All means (averages) of the handwriting characteristics were smaller in the alcohol abuse population except for that of the width of the Personal Pronoun I which was larger in the recovering alcoholic population. The smaller writing of the alcoholics in successful therapy may be due to their greater effort to maintain self-control, to a need to focus inward upon themselves or to some other aspect of their therapeutic program that has not been determined. The possible use of handwriting in determining the success of psychotherapy is discussed.

INTRODUCTION

Alcoholism is a major concern of our society. Its cost to society is astronomical in terms of lost productivity, traffic deaths, suicides and health costs (Lewinson, 1989). There is also a cost in future well-being of lives not yet born.

One theory of alcoholism (Goodwin, 1979), is that it is a complex reaction to environmental stimuli exacerbated by genetic factors associated with excesses and limitations. The potential alcoholic must be able to consume a lot of alcohol (i.e., lack of intolerance for alcohol), experience a greater euphoria from alcohol consumption, experience dysphoria requiring more alcohol (i.e., a hangover), and relapse after periods of binge drinking. These factors lead to conditioned responses to the environment leading to alcoholism.

Drinking alcohol produces a short-term transient change in brain function similar to that of depression, even though the immediate reaction may be euphoric. The effect of consuming alcohol on handwriting is rather marked. There is an impairment of handwriting causing, in general, a larger handwriting and a lessening of fine motor control, although this response is not consistent enough to be measurable for forensic purposes.

Beck (1985) identified three stages of handwriting responses to alcohol: (a) normal mild drinker: graphics essentially indistinguishable from the state of being sober; (b) intoxicated for the non-drinker and the alcoholic: enlarged and careless writing, illegible, disintegrated; withdrawal (alcoholic is sober, but not well): lack of fluency and regularity to the writing, signs of tension, tremor, angular forms, ataxic movement, and sometimes decreased size. Intoxication and withdrawal are opposite extremes of the state of being normal. In both cases there is loss of control, due to depressed relaxation with intoxication, and due to increased tension in withdrawal.

Geller, et al. (1991) reported a novel way to use handwriting to prevent alcohol-impaired driving, a most significant health problem and the Number 1 killer of young people. As each of 61 students entered a fraternity party he or she was asked to sign a consent form and write the sentence, "I have read and understand the above statement." At the same time, their blood alcohol level was determined by an Alco-Sensor III breathalyzer that had recently been calibrated. Upon exiting the party, the 61 students again were asked to sign their name, and each took the breathalyzer test. When the exit BAL was 0.10 indicating legal intoxication, 90% of the 28 judges correctly discriminated the exit from the entrance sentences. When the BAL's reached 0.15, 25 of the 28 judges discriminated 80% or more of the intoxicated parties by signature alone.

Each of the above papers relating alcoholism to handwriting are concerned with the immediate effects of drinking of alcohol and both are based upon gross visual viewing of the handwriting. This paper reports on the effects of alcohol on handwriting during the time the alcoholic is no longer drinking the substance. Indeed, the alcoholic is being counseled for the disorder. The results of careful measurements indicate the handwritings of recovering alcoholics are generally smaller than the handwritings of normal controls (see Beck, 1985).

METHODS

The handwritings of 62 alcoholic patients of a psychotherapist (Bishop) are compared to the handwritings of 66 sex-age matched controls. Where the patients were in some form of recovery, the controls were randomly chosen writers taken from various handwriting conferences who did not have alcohol problems. These controls were matched for age and sex. Each of the subjects wrote a sample of their handwriting on a blank sheet of paper using a medium ball-point pen.

The alcoholics had been in psychotherapy for 28 days inpatient and 12 weeks aftercare. Average age of the alcoholic population was 39, with 55% males. Controls had an average age of 49 with 44% males.

THE QUICK RED FOX JUMPS OVER THE LAZY BROWN DOG.

"The quick red fox jumps over the lazy brown dog.

"The quick red fox jumps over the lazy brown dog."

"The quick red fox jumps over the lazy brown dog."

THE QUICK RED FOX JUMPS OVER THE LAZY BROWN DOG.

Figure 1. Handwriting samples of alcohol abuse therapy population.

The quick red fox jumps over the lazy brown dog.

"The quick red fox jumps over the lazy brown dog."

The quick red fox jumps over the lazy brown dog.

"The quick red fox jumps over the lazy brown dog."

The quick red fox jumps over the lazy brown dog.

Figure 2. Handwriting samples of control population.

Fifteen reliable handwriting characteristics (Peeples and Retzlaff, 1993) were measured in each of the alcoholic and control samples. The characteristics measured included heights, widths, angles, or areas covered of lowercase letters *a*, *g*, *t*, *d*, *i*, and the personal pronoun *I*. Also measured were the width of the word *the* and the angle to the baseline of the letter *l*.

All measurements were made with the aid of a digitizing tablet (Jandel Scientific, CA) connected to a personal computer. After establishing that measurements of the same 25 handwriting samples by each rater gave an inter-rater reliability of 93%, individual raters made all the measurements.

The raters used the intersection of the cross-hairs on the puck of the digitizing tablet to determine the points for linear, and angular measurements; the intersection of the cross-hairs was also used to follow the line circumscribing any area to be measured. The results of the measurements were subjected to independent t-test statistical analysis.

RESULTS

Table 1 lists the 15 reliable handwriting characteristics measured in this study. These characteristics were shown to be reliable and valid by the method given in Peeples and Retzlaff (1993).

Table 2 shows that 7 of the 15 measured characteristics from the alcoholic abuse population in this study proved significantly different measurements from that of the control population. Two proved significant at the .05 level and five proved significant at the .01 level.

The means of 14 of the 15 measured handwriting characteristics of the 62 alcohol abuse samples were smaller than those from the control group. Only the mean of the width of the upper personal pronoun *I* was larger than that of the control sample.

Both measurements of the letter *g* (height of the lower loop, and area of the lower zone) were very significant or significant. Two measurements of the letter *t* (height of the stem and length of the t-bar) was also significant.

Of the four measurements of the personal pronoun *I*, only the height of the U-PPI is significant. The height of the letter *i* was not significant. These results are in agreement with Lewinson (1989) who found extremes in the height of the middle zone letter *i* in the alcoholic not in psychotherapy. However, the width of the word *the* was significantly smaller in the alcohol abuse therapy population.

Table 1. Handwriting Characteristics and Their Abbreviations

Characteristics	Abbreviations
1. Height of oval of letter <u>a</u>	Ht ov-a
2. Area of oval of letter <u>a</u>	Ar ov-a
3. Height of lower loop of letter <u>g</u>	Ht ll-g
4. Area of lower loop of letter <u>g</u>	Ar ll-g
5. Height of stem of letter <u>t</u>	Ht st-t
6. Height of crossing of letter <u>t</u>	Ht c-t
7. Length of crossing of letter <u>t</u>	Le c-t
8. Height of stem of letter <u>d</u>	Ht st-d
9. Height of letter <u>i</u> (not including dot)	Ht i
10. Height of upper loop of personal pronoun I . .	Ht U-PPI
11. Width of upper loop of personal pronoun I . .	Wt U-PPI
12. Area of upper loop of personal pronoun I . . .	Ar U-PPI
13. Area of left loop of personal pronoun I . . .	Ar L-UPPI
14. Width of word <u>the</u>	Wt the
15. Angle of letter <u>l</u> (with base line)	An l

Table 2. Means and Standard Deviations of Measurements of Handwriting Characteristics from an Alcoholic Population During Therapy Compared to those from a Sex/Age Matched Control Population.

Handwriting Characteristic	Alcohol Population		Control Population		P
	Mean	SD	Mean	SD	
1. Ht ov-a (mm)	2.76	(0.82)	3.14	(1.24)	.037*
2. Ar ov-a (sq mm)	3.75	(2.27)	4.10	(3.04)	.462
3. Ht lz-g (mm)	4.54	(2.03)	5.77	(2.06)	.001**
4. Ar lz-g (sq mm)	6.18	(5.65)	9.89	(10.84)	.014*
5. Ht st-t (mm)	5.33	(1.72)	6.03	(2.02)	.033*
6. Ht c-t (mm)	3.04	(1.34)	3.54	(1.54)	.069
7. Le c-t (mm)	5.23	(2.76)	7.20	(5.32)	.008**
8. Ht st-d (mm)	5.47	(2.04)	5.47	(1.81)	.999
9. Ht i (mm)	2.37	(0.79)	2.50	(0.88)	.388
10. Ht U-PPI (mm)	4.60	(1.56)	5.34	(2.07)	.021*
11. Wt U-PPI (mm)	3.20	(2.34)	2.97	(2.50)	.587
12. Ar U-PPI (sq mm)	4.39	(5.26)	6.08	(6.36)	.101
13. Ar L-PPI (sq mm)	3.03	(2.22)	5.41	(11.69)	.099
14. Wt the (mm)	12.30	(2.91)	13.66	(4.67)	.044*
15. An l (degrees)	119.21	(23.25)	119.21	(15.26)	.074

* significant at .05 level; ** significant at .01 level.

DISCUSSION

The fact that all the measurements of handwriting characteristics were significantly smaller in the alcohol abuse writers except for that of the width of the U-PPI appears to be of some consequence. Most of the controls, although randomly chosen, had some knowledge of handwriting analysis. This may have affected the data. Smaller writing such as that of scientists tends to go along with the focused writer, the one who can work with details. It would seem to go along with that person who is more self-contained, less gregarious, more of an introvert, i.e., self-centered (Lewinson, 1989). The implication would be that recovering alcoholics may be taking on these characteristics as well.

It is of some interest that the height of the U-PPI is significantly smaller than that of the control population, (alcoholic mean = 4.60mm, control mean = 5.34mm) but the width of the upper personal pronoun I is larger than that of the controls (alcoholic mean = 3.20mm, control mean = 2.97mm). The implication is that the height and width of the U-PPI are under different inherited controls. Further, if we consider the possibility that aspects of the PPI relate to both maternal and paternal archetypes, the U-PPI related to the father and the L-PPI to the mother, then perhaps we may have a clue in terms of the psychosexual relationship of the writer to his or her parents. Said in another way, if the U-PPI is shorter and wider, this may symbolically relate to a diminished influence of the father.

Although the U-PPI was shorter in the alcohol abuse writers, as compared to the controls, this area was also wider. In a sense, we could say that the U-PPI appears "squashed" in the alcohol abuse group. Nevertheless, the overall area of the U-PPI in this group was not significantly different than the controls. In other words, the U-PPI was shorter and wider in the alcohol abuse writers and taller and thinner in the controls.

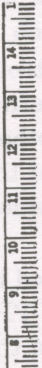
That the height of the stem of the letter *t* is significantly smaller than in the controls, but not the height of the letter *d* suggests that these two similar appearing stems are not under the same genetic control. Again, the evidence that the height of the oval of the letter *a* is significantly smaller than controls but that the area of the oval of the letter *a* is not significantly smaller suggests a separate control system for the height of the letter *a* as compared to the width and consequently the area (Peeples and Retzlaff, 1991). For this to happen, the width of the letter *a* must thereby be smaller in the control population on the average since height times width gives the area of the oval.

The length of the t-bar was about 2mm shorter in the alcohol abuse population as compared to that of the control population. If lateral pressure strokes, such as t-bars, are associated with the externalization of inward aspirations, i.e.,



There is a problem I would like to deal with in my life but I am not sure how to and the difficulty I have I have been having seems to be drug abuse. Instead I would prefer to turn this into an opportunity to learn more about how I

Figure 3-a. Alcoholic before therapy.



There is a problem I would like to deal with in my life but I am not sure how to and the difficulty I have been having seems to be having control over my own life and making prosperous decisions towards my future. Instead I would like to turn this into an opportunity to learn

Figure 3-b. Same writer beginning therapy.



There is a problem I would like to deal with in my life but I am not sure how to and the difficulty I have been having seems to be... Instead I would prefer to turn this into an opportunity to learn more about how I am as a learner and I trust that the analysis of my handwriting will yield insights into how I can

Figure 3-c. Same writer after successful therapy.

Upper - PPI

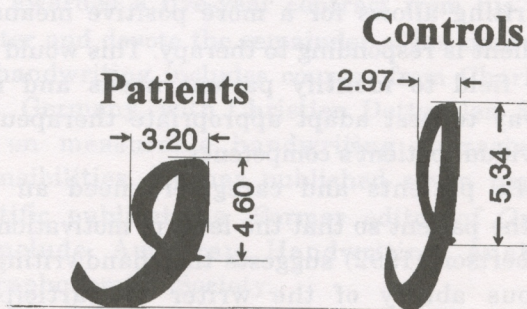


Figure 4. The Upper Personal Pronoun I (U-PPI) height measurements for alcoholic therapy group and control group.

“will power,” then this finding would suggest a decided loss of “will power” in the alcohol abuse population. They have lost the ability to a large degree of persevering, of carrying out desires.

The angle of the letter *l* was not significantly smaller in the alcohol abuse handwriting. However, a smaller mean of the angle of the letter *l* compared to the control population suggests that the alcohol population may be slightly less emotional in their decision-making and less interested in making contact with other people in general.

A study of Lewinson (1986) of 70 handwriting samples compared handwritings from before the onset of alcoholism to the recovery period. A number of characteristics were found in the extreme. Most noticeably extremely large or extremely small handwritings. Extremes in the height of upper and lower lengths and extremes in breadth of the letters were also observed.

The evidence from our study shows that seven of fifteen measurements are significantly smaller in the writing of the alcohol abuse population compared to controls and suggests that the total writings of the alcohol abuse population tends to be smaller in both height and width measurements. This view is substantiated by the fact that a comparison of the means of the two populations shows 14 or 15 of the means of the alcohol abuse population to be smaller than controls.

Lester (1981) reports several studies where alcohol changes handwriting. What is needed is an accurate knowledge of what kind of changes are produced and under what conditions. This paper may be a step in the direction of accurately depicting the effects of alcohol on the abuser under treatment.

Study of handwriting allows for a more positive means of determining whether the patient or client is responding to therapy. This would help meet a need for the mental health field to identify patient needs and resources. Thus, handwriting offers a way to best adapt appropriate therapeutic environs and treatment to fit the individual patient's competency.

Further, alcoholic patients and caregivers need an indicator of the unconscious mindset of the patient so that the level of motivation towards therapy can be determined. Robertson (1992) suggests that handwriting may be used to demonstrate unconscious ability of the writer to participate in therapy. Handwriting samples taken early on and during the process of psychotherapy may well indicate whether the patient is responding to therapy or not.

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BIOGRAPHY: Ed Peeples is Professor Emeritus Affiliate in the area of Biological Sciences/Genetics at the University of Northern Colorado in Greeley. He holds a doctorate degree in Zoology-Genetics from the University of Texas, Austin. In 1992, Dr. Peeples was awarded a five-year contract from his university to teach one course per semester and devote the remainder of his time to handwriting research. His training in handwriting includes courses from Charlotte Leibel, Felix Klein and in Stuttgart, Germany, with Christien Dettweiler. Since 1987, he has been doing research on measurable handwriting characteristics as part of his university responsibilities. He has published seven papers on this work in a variety of scientific publications. Former editor of *Graphological Sciences*, memberships include American Handwriting Analysis Foundation and International Graphonomics Society.

BIOGRAPHY: George Bishop is a certified senior levels addictions counselor in the state of Colorado. He holds a Master of Arts degree in counseling from Northern Arizona University, and certification in handwriting analysis from IGAS. Mr. Bishop was recognized in 1989-1990 for contributions to counselor development in the field of psychotherapy.

BOOK REVIEW: *The Alphabet and the Brain: The Lateralization of Writing* by D. de Kerckhove and C.J. Lumsden, Editors, New York, NY: Springer-Verlag Publishers, New York, NY, 1988.

Writing from left to right across the page is the "normal" way to write. Wrong!

Humans have written in every conceivable direction on a page. Top to bottom, moving to the right, moving to the left, top to bottom and bottom to top continuously, right to left and then left to right continuously. Only in relatively recent history have humans come to somewhat of a consensus in writing each line horizontally from left to right as the pen moves down the page, and that is predominantly for the Western writer.

The book *The Alphabet and the Brain* traces the history of the direction of handwriting in many cultures of the world. It traces the gradual evolution of handwriting to the left-to-right direction of horizontal lines moving down the page. It further asks why left-to-right writing has become the established way today.

This lateralization of writing has both external and internal causes. The external cause is the adoption of pens in writing. The ink doesn't dry instantly and writing from left to right avoids smearing the ink. More importantly, the eye can observe what has been written to see if it is correctly written.

The internal cause has to do with the lateralization of the brain. The language centers evolved over time to the left side of the brain. Nerve circuits cross over from the left side of the brain to the right side of the body. Therefore, the right hand, responding to the left side of the brain, is the dominant hand for writing. Some stress of embryonic development causes some people to be "lefties." For the most part, these individuals also have left brain dominance of their handwriting.

One chapter, "Language Processing," by Patricia E. Grant, is worth the price of the book (\$113). The language centers of the brain are described in readable detail. Diagrams of the parts of the brain used in silent reading and writing are included in the chapter. Grant suggests that much of the brain is involved in the writing process. This observation adds great weight to the argument that the brain commands the writing process using whatever anatomical tools are available: right or left hand, lips or toes.

Handwriting is a sensitive indicator of brain function. A brief survey of the literature discloses reports of handwriting used to diagnose or track the progress of medication from the following diseases: AIDS, alcohol abuse, Alzheimer disease, depression, drug use, dysgraphia, dyslexia, Parkinson disease, suicide, and tremor. And this is just the beginning!

Ed Peebles, Ph.D.

MEASURING HANDWRITING TO IDENTIFY THINKING AND BEHAVIORAL STYLES IN FOUR QUADRANTS OF THE BRAIN

Jeanette Farmer

ABSTRACT: Thinking styles and emotional styles in four quadrants of the brain could be identified through use of the Graphological Psychogram. The quadrants were the left and right cerebral and the left and right limbic. Results were significant for all but the right cerebral region. The Herrmann Brain Dominance Instrument, a forced choice, self-assessment questionnaire, that identifies four thinking styles, was the control instrument. These cognitive styles were correlated with the characteristics of handwriting movement found in Pophal's four "bio-types" of cortex, striatum, global pallidus and brain stem writers. Statistical evaluation revealed that measuring the psycho-motor impulses in handwriting could not only identify the left and right hemisphere characteristics, but also conscious and unconscious factors.

I. BRAIN DOMINANCE

Extensive physiological research has demonstrated the two hemispheres of the brain emphasize different specialized functioning (Sperry, 1970, McLean, 1973). This so-called "lateralization" can be measured neurologically as different brain wave patterns for each hemisphere, and it can also be measured in observable behavior. The Herrmann Brain Dominance Instrument (HBDI), a scientifically-designed and validated pen and pencil survey, uses forced choice/paired adjectives, handedness and occupational descriptors to identify four distinct thinking and emotional styles loosely linked to the four Jungian types: **A** - THINKING (Left Cerebral); **B** - SENSING (Left Limbic); **C** - EMOTIONAL (Right Limbic); and **D** - INTUITIVE - (Right Cerebral).

Constructs underlying Herrmann's four-quadrant theory are also built upon concepts drawn from biofeedback, Triune Brain theory and split-brain research, although they do not refer to actual locations or structures in the brain.

They are theoretical constructs metaphorically representing cerebral (conscious) and limbic (emotional) areas of the brain, which Herrmann defined as **A** and **D** (conscious) and **B** and **C** (emotional) quadrants. These four quadrants in turn are polemically related, (i.e., preferred or avoided) whereby **A** (THINKING) opposes **C** (EMOTION) and **B** (SENSING) opposes **D** (INTUITION). Each quadrant has multiple attributes. Thus, on the **B-D** polarity, Herrmann, prefers to represent **B** as "safekeeping" and this opposes **D**, "experimental," i.e., adventurous. For example, Figure 1, Herrmann's quadrant **A** (upper-left cerebral), the logical, analyzer, problem solving type, is stressed whereas quadrant **C** (lower right limbic) associated with interpersonal, emotional, spiritual qualities is not stressed, i.e., avoided.

HERMANN BRAIN DOMINANCE PROFILE

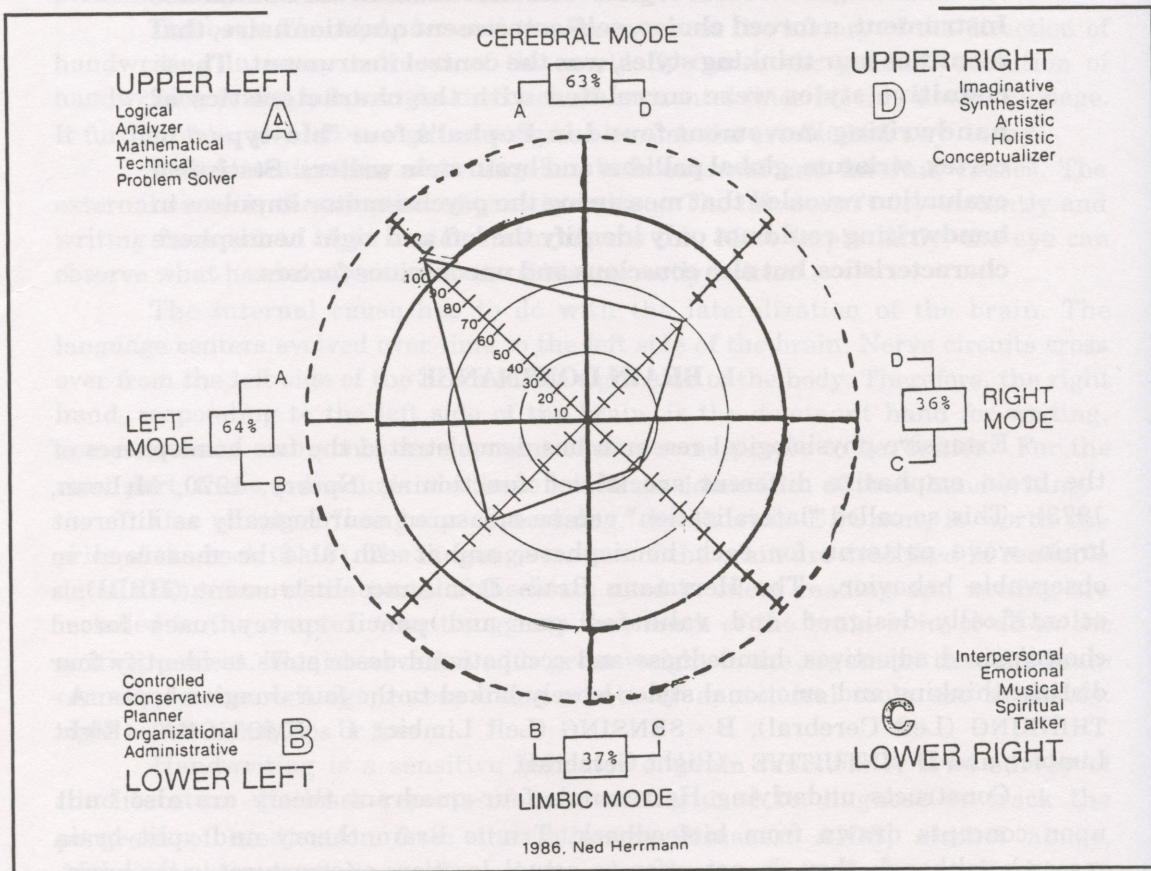


Figure 1. Brad, age 21.

The Herrmann Brain Dominance Instrument has evolved over 20 years and has been administered to over a one million individuals around the world. Validated studies conducted by WICAT, Inc. (Orem, Utah), the University of Texas at Arlington and by Applied Creative Services, Ltd., have established the HBDI as an accurate and reliable instrument. Several internal and external construct validity studies were constructed. Internal construct validation studies indicated which kinds of mental processes cluster together, (e.g., logical and mathematical). External construct validity indicates the HBDI I/E (introversion/extroversion) score has been correlated to the Myers-Briggs Type score and is highly related, (Herrmann, p. 350). It is supported by several dozen dissertations including a 1987 internal construct validity study by Kevin Ho for his doctorate at Brigham Young University. This involved 7989 subjects that used the quadrant scores for occupational profiling replicating an earlier study and indicated construct validity of the four clusters of brain dominance (p. 352). Five factor solution found three factors strongly bi-polar (p. 370) which validated previous studies.

II. RELATIONSHIPS OF HANDWRITING BEHAVIORS TO BRAIN FUNCTIONS

European studies related to the physiological basis of handwriting patterns have a long history. Notable researchers such as German neurophysiologist/graphologist Rudolph Pophal and Hungarian psychologist/graphologist Klara Roman conducted approximately 75 collective years of research in the physiology of handwriting. Only small portions of Pophal's major work, *Handwriting-Brainwriting*, have been translated into English.

Pophal's (1949, 1958) studies in muscular tonus established handwriting's physiological/psychological link in the brain. He observed that the fundamental nature of the major motor centers decisively influenced the regularity or irregularity of the movement style. These brain areas -- the pallidus, the striatum and the cerebral cortex -- derived from phylogenetically different developmental stages. He determined that movement as a pure product of the deepest strata of the brain carried handwriting's emotional, or unconscious, component. The movement style is directly related and induced by the fundamental nature of the major motor centers. Contracted movement exhibits disciplined self-control and/or emotional inhibition. Highly released movement is a primary indication of emotional dynamics and drive.

Pophal classified four personality typologies, or "bio-types", on the basis of essential differences in types of motor behavior. These were associated with movement patterns (Roman, p. 177) and corresponding specific motor centers:

Area of the Brain

Cortex:

Corpus Striatum:

Global Pallidus:

Brainstem:

Movement Patterns

Mechanical, regulated, aimed movement

Rigidly controlled, regulated movement

Abundant, irregular and driven movement

Rhythmic, unpretentious, lively movement

Pophal also established five degrees of tension in handwriting (1949) and by microscopic examination identified three different types of stroke quality that carry basic personality and health information for each type (Bernard, 1985, Backman, 1975, Karohs, 1985).*

Klara Roman conducted 24 research projects in the physiology of handwriting over 40 years, much of it for the Hungarian government. Using the pneumatic graphodyne, she measured neuromuscular tension patterns in the production of handwriting. She conducted an 8 year study of 2,300 children as they proceeded through the maturational process. She also studied handwriting and speech, and tension and release patterns in handwritings of rheumatoid arthritics. After immigrating to America in the late 1940s, Roman developed a two-semester accredited graphology training course at the New School for Social Research in New York City in the 1950s. She designed the Roman/Stamepfli Psychogram, a complex technical instrument, which she introduced in this country in 1956. This method formed the basis for this study.

Roman states that it is common knowledge that the neuromuscular tonus is affected by, and in turn affects, personality and behavior patterns. Tension in contracted or released movement is a bi-polar physiological concept, based on retained or released tension which influences the expenditure of energy (pp. 483-485).

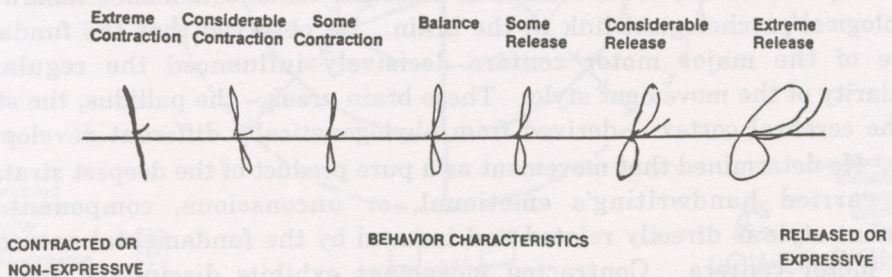


Figure 2. Emotional Contraction or Release as a Continuum of Expressive Behavior as seen in handwriting characteristics.

* For refutation of Pophal's work on stroke quality and personality type, see A. Levine, *Physical Aspects of Stroke Texture*, ASPG, 3, pp. 81-91.

Motor impulses activate and govern the milli-second, antagonistic interaction of the sense organs (afferent fibers from the environment to the brain), and muscle sets (efferent fibers from the brain to the environment) that create movement patterns in up or down, left or right direction. Each carries inherently different tension levels. Flexor muscles control downward and leftward movement which contain more retained tension. Upward and rightward movement controlled by the extensor muscles features a milli-second release of tension. Psychodynamic theory interprets contracted or released movement as a reflection of inhibition or discipline versus expressive responses to emotional sensations. Contracted or expansive movement style contains the psychological implications that motivates expressive behavior as seen on paper. Handwriting identifies the physical, mental and emotional state of the writer at the time of writing.

Other experts who studied the physiological and psychological link to handwriting's movement in the brain include American graphologists Thea Stein-Lewinson and psychologist Joseph Zubin (Lewinson, 1942). These authors evaluated 22 factors on a seven point scale with reference to a mid-point of "rhythmic balance" to define tension contraction or release tendencies on the writings of 5 non-delinquents and 15 delinquent subjects. Their study found less deviation from the central point of the scale in the handwriting of non-delinquent subjects.

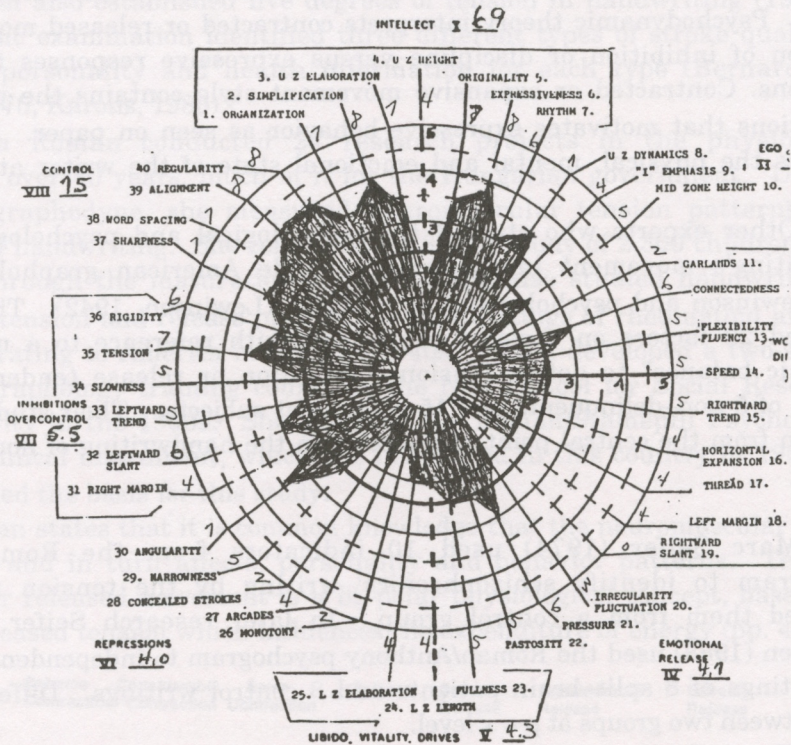
Marc Seifer (1974) used 10 indicators from the Roman/Anthony Psychogram to identify schizophrenics' writing by the tension factors that separated them from a control group. In later research Seifer, Siegel and Tenhouten (1988) used the Roman/Anthony psychogram to independently score the handwritings of 8 split-brain patients and 8 control writings. Differences were found between two groups at $p = x$ level.

Choen Sarah (1988) analyzed 24 children's writings for 17 personality characteristics, four of which were scored for hyperactivity. Profiles obtained by graphological analysis matched the appropriate clinical profiles to a statistically significant degree. Graphologists were able to distinguish the handwritings of normal and those with a diagnosis of hyperactivity. They were able to differentiate between the specific syndromes of hyperactivity and retardation (pp. 229).

The Roman-Staempfli Psychogram used to evaluate the handwritings in this study is a circular configuration with 40 handwriting indicators arranged as spokes around a wheel. Clusters of related indicators are grouped in major dimensions of personality as follows:

- | | |
|-------------------------|-------------------------------|
| I. Intellect | V. Libido, Vitality & Drives, |
| II. Ego | VI. Repressions |
| III. World Directedness | VII. Inhibitions/Overcontrol |
| IV. Emotional Release | VIII. Control. |

Figure 3: The Graphological Psychogram of Brad, 21, right handed.



© Graphex

Roman called it a "pictorially rendered profile in a circle of the writer's personality projected as a dynamic whole" (1968, p. 519). Based on 35 years of research, Roman designed it to provide an objective synthesis with which to evaluate the size, quantity, emphasis or frequency of graphic indicators. She based its organizational design on the strength of the contracting or releasing influence in various aspects of the movement, form and spacing. It is a graphic expression of the individual's energy flow as measured by the physiology of the movement style. The movement style carries different tension factors and defines characteristics along a continuum that portrays emotional contraction or release. Indicators are measured objectively scored on a scale of 1–5 with the range from little or no

expression (0 or 1) to over expression (4 or 5) with 2.5 average. (Unlike the Roman/Anthony Psychogram which uses a 10-point scale, this uses a 5-point scale). Indicators correlate with personality characteristics and are related to major dimensions of personality.

Measurements are plotted on a standard form to provide a "graphic map" or mandala of the personality (1968, pp 515-524). Directional weight of the mass (or quadrant stressed) is central to interpretation. No dimension is significant on its own as it is inseparable from the whole. The left half of the Psychogram represents contraction (introversion) and the right half represents release (extroversion). Dividing the circle across the middle, the top half are mental (conscious) factors while the bottom half represents biologically rooted, unconscious factors.

HYPOTHESIS

This study was designed to test the hypothesis that handwriting's psycho-motor impulses demonstrate the strength and intensity of the brain's four thinking and emotional styles as measured by the Graphological Psychogram. The styles were defined by the Herrmann Brain Dominance Instrument (HBDI).

METHOD

Herrmann created a brain dominance chart in the form of a mandala which segmented four distinct quadrants and four corresponding personality types:

A - Left Cerebral (LC)

D - Right Cerebral (RC)

B - Left Limbic (LL)

C - Right Limbic (RL)

In order to compare the Psychogram scores to the HBDI, the author created a Graphological Brain Dominance chart which utilized the same four quadrants, placing various graphological indicators that corresponded to personality types in each respective quadrant. Each chart (Graphological Brain Dominance Chart and HBDI chart) were independently scored and then the two charts were compared.

Seventeen males (ages 22-72) and 30 females (ages 22-70), 2 left handed and 45 right handed, participated in this study. Participants were asked to produce 1 1/2 to 2 pages of spontaneous handwriting (not copied or dictated) in the printing or cursive style favored, on a random topic on 8 1/2 x 11 unlined paper. Their sample

included all capital letters and numbers from 1-10. Two graphologists certified by the American Handwriting Analysis Foundation and trained in the Graphological Psychogram scored the handwritings. The HBDI was distributed when participants submitted a handwriting sample. Participants mailed the HBDI to Herrmann for scoring. Herrmann retained HBDI results until handwriting measures had been completed.

To define dominance for the quadrants, it was necessary to align Herrmann's four thinking style characteristics with Pophal's behavioral "bio-types" topologies of personality so variables could be defined. Using Pophal's behavioral descriptors, they were aligned as follows:

Cortex writer aligned with the Left Cerebral -- **LC**

Striatum writer aligned with the Left Limbic -- **LL**

Global Pallidus writer aligned with the Right Cerebral -- **RC**

Brainstem writer aligned with the Right Limbic -- **RL**

The author assigned specific Psychogram indicators and a select number of Pophal's variables to define each quadrant's dominance. To incorporate Pophal's specific movement characteristics which were not Psychogram indicators, his variables were assigned to the quadrants based on its average or above average influence in contributing to a specific thinking or behavioral style. The Left Cerebral, the Right Cerebral and the Left Limbic quadrants each had 22 variables and the Right Limbic had 23 for a total of 89 variables.

In order to utilize a 10 point scale, Psychogram indicator scores were doubled. (See Table I) If a doubled score was stressed, (numerically, if it achieved a score of more than 5), it was assigned to a particular quadrant. A few specific graphological factors, such as "i" dots or simplified lower zone (LZ), not scored by the Psychogram but deemed as possibly influencing quadrant dominance were included in the appropriate quadrant.

In the second phase of scoring, quadrant emphasis was determined by an "either/or" method. Either the quadrant was emphasized or it wasn't. This was achieved by calculating extreme scores of 7 or more as a total indicator of the quadrant thus, these scores were weighted as a 10.

In addition to the correlation analysis of the quadrants, Principle Components Analysis using the Statistical Package for Social Sciences (SPSS) software was completed for a test of internal consistency of the variables. This factor analysis tested each variable against each and every variable in each quadrant -- an inter-hemisphere, intra-hemisphere and diagonally opposed quadrant check.

Scoring Chart of Handwriting Variables for the Four Quadrants

77

Name _____ Age ____ Sex ____ LH/RH ____ hooked ____ not hooked

LEFT CEREBRAL TOTAL _____

- ___ regularity
- ___ simplification
- ___ sharpness
- ___ right slant (score in reverse)
- ___ angularity
- ___ uniform connections
- ___ left slant
- ___ alignment
- ___ MZH (score in reverse)
- ___ wide line spacing
- ___ firm disconnected script
- ___ regular, mechanical beat
- ___ blunt endings
- ___ connectedness
- ___ accurate i-dots, precise t-bars
- ___ linear cursive
- ___ tension
- ___ narrow or retraced

RIGHT LIMBIC TOTAL _____

- ___ dynamic, fluid, stormy movement
- ___ irregularity
- ___ horizontal expansion, right trend
- ___ enriched forms (e.g., Greek e's)
- ___ LZ fullness
- ___ rising lines
- ___ broad left margin
- ___ LZ length
- ___ thready, air strokes
- ___ connectedness w/fluidity
- ___ close, dense tangled lines
- ___ originality
- ___ illegibility or disintegrating forms
- ___ Pressure
- ___ UZ elaboration
- ___ pastosity
- ___ simplified caps
- ___ small right margin w/speed

LEFT LIMBIC TOTAL _____

- ___ narrow MZ
- ___ narrow LZ
- ___ restricted LZ length
- ___ connectedness
- ___ regularity
- ___ organization
- ___ alignment
- ___ arcades
- ___ right slant (score in reverse)
- ___ left slant
- ___ left trend
- ___ simplification
- ___ retracing
- ___ monotony; inhibited
- ___ slowness
- ___ space between words
- ___ displaced pressure
- ___ rigidity
- ___ tense
- ___ wide right margin

RIGHT LIMBIC TOTAL _____

- ___ right trend
- ___ horizontal expansion
- ___ low pressure (score in reverse)
- ___ elaborated middle zone
- ___ garlands
- ___ fullness
- ___ pastosity
- ___ right slant
- ___ close or tangled lines
- ___ soft, rounded forms
- ___ simple, unpretentious forms
- ___ word spacing (score in reverse)
- ___ LZ elaboration
- ___ fluidity
- ___ regular, balanced, rhythmic
- ___ diminuendo
- ___ expressive
- ___ connectedness
- ___ left-tending UZ as in looped d's
- ___ small left margin

RESULTS

Three of the four quadrants were statistically significant:

A – Left cerebral (LC) .356 – $< .05$ D – Right cerebral (RC) .128 – n.s.
B – Left limbic (LL) .400 – $< .01$ C – Right limbic (RL) .388 – $< .01$

This supported the hypothesis that the graphological chart and the HBDI chart correctly measured quadrant brain dominance. However, varied quadrant significance merits further discussion. LC was not as significant as the RL and LL. This can be attributed in part to differences in scoring procedures that produced the raw scores. For instance, as mentioned before, the HBDI scored for gender and handedness which was not incorporated into the handwriting profiles.

The author recognized in the pilot study that significant scoring procedure differences existed between the methods. It was hypothesized that the LC quadrant would carry the greatest variance because the HBDI assesses preference by self-assessment whereas measuring handwriting tends to identify latent potential and unconscious factors. When the HBDI identified a strong right brain thinking preference in pre-research samples, it also registered a very low intellectual "avoidance" raw score for the left cerebral. This meant that the individual preferred to avoid situations that required the LC mental processes, not that they were incapable of utilizing them. In 41 of 47 handwriting profiles, LC scores were consistently larger, at times double, even triple in some cases, than the corresponding HBDI LC self-assessment based raw scores. Raw scores for both profiles are seen in the box under the A, B, C, D quadrants. The handwriting profiles' raw score summation seen in the boxes on the graphological dominance chart were used to plot the graph. Visually comparing the profiles' pictorial emphasis shows consistently stronger portrayal of intellectual capacity in the LC quadrants of the handwriting profiles as compared to the HBDI. This affected the number of four quadrant matches attained because of very low "avoidance" left cerebral HBDI score given when RC mental processes were preferred. Consequently, only nine four-quadrant matches, 2 males and 7 females, with the same hierarchy of quadrants occurred (significant at $< .05$).

CONGRUENT PROFILES

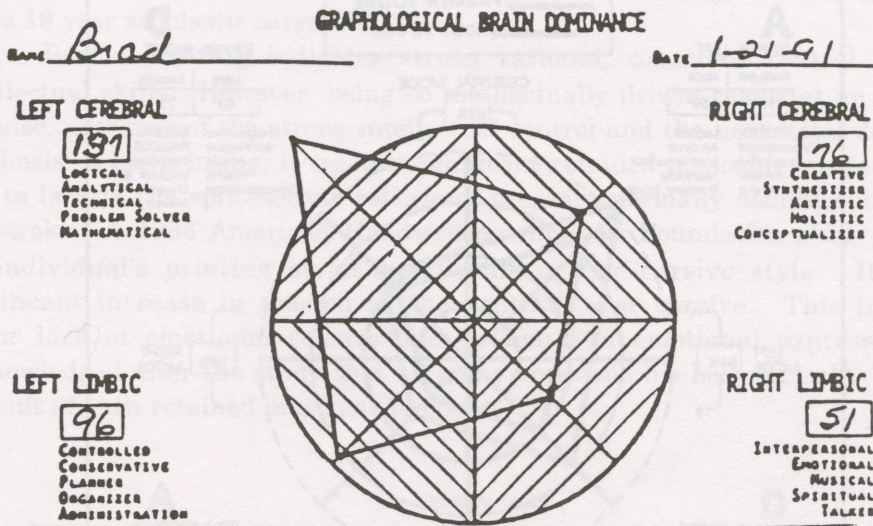


Figure 4: Brad's Farmer profile reveals strong left cerebral dominance.

MY WORK IN THE GENETICS LAB IS CENTERED PRIMARILY ON POINT MUTATIONS UTILIZED IN THE PROBING OF PHOTOSYNTHETIC CENTERS. I USE VARIOUS RECOMBINANT DNA TECHNIQUES INCLUDING POLYACRYLAMIDE GEL ELECTROPHORESIS, LAMBDA PHAGE UTILIZATION, AND M13 CLONING SYSTEMS. THE WORK IS TEDIOUS, AND REQUIRES THAT YOU MOVE QUICKLY

Figure 5: Brad's printing: mostly all down strokes, very directed, highly regular and controlled with regular forms and spacing, a near perfect example of Pophal's "cortex" writer.

HBDI & Graphological Profile Score Comparison

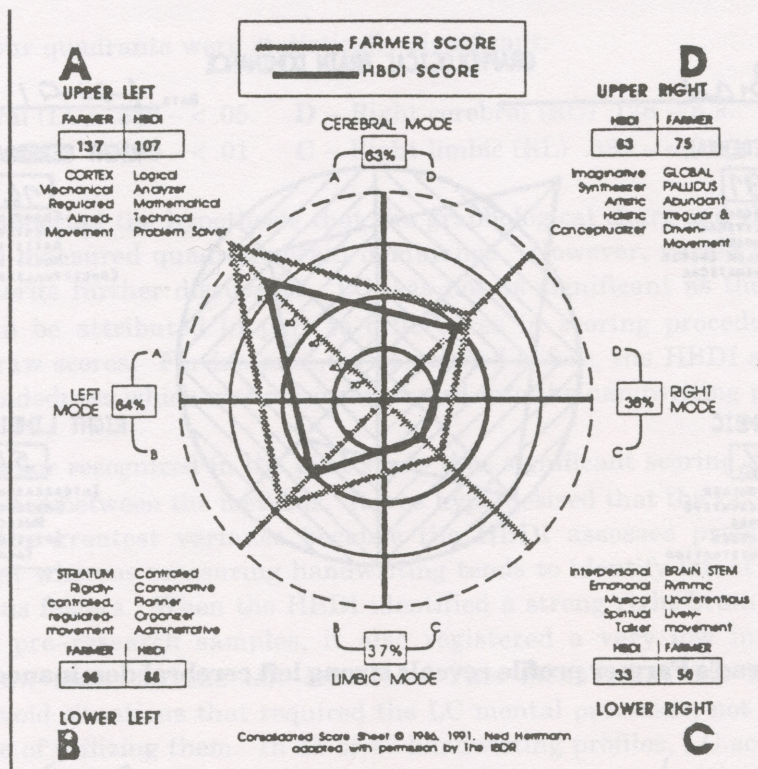


Figure 6. Brad's graphology/brain dominance (Farmer) score, the jagged outer triangular pattern, superimposed over Brad's HBDI, inner solid score. The HBDI pattern reflects Brad's self-score as compared to his handwriting score. In this case, it is a very close match.

Several of the nine congruent handwriting profiles and HBDI profiles were superimposed which reveals an intriguing, near perfect similarity of the graphic mass of the four quadrant patterns. (The handwriting profile is the larger area.) Figure 4 is Brad's superimposed HBDI and Graphological Brain Dominance Profile, a near-perfect four quadrant match with its strong upper-left emphasis. Compare this with his Psychogram pattern, Figure 3, with its strong upper left directional emphasis. This quadrant is where major intellectual/control factors are measured and portray the strength of his intellectual capacity and orientation. Note in particular, the capital P's. This similarity is not so surprising when one

realizes that the Psychogram is based to some extent in a pictorial sense on the actual graphic pattern it is measuring. (Post research note: Brad, currently in a biochemistry PhD. program, has consistently attained a 4.0 grade average for most of his 19 year scholastic career.)

Brad's printing indicates strong rational, conscious control and keen intellectual skills. However, being so intellectually driven comes at an emotional expense. Because of the strong intellectual control and the near-total downstroke emphasis in his printing, it creates significant retained muscular tension. This is due to lack of the split-second release of pressure normally attained in cursive's up-stroke. A 1983 American Handwriting Analysis Foundation study compared an individual's printing styles versus his or her cursive style. It found a significant increase in tension in the printing over cursive. This indicates a major lack of emotional release due to denial of emotional expression. Brad acknowledged after the study that on many occasions his body literally "hurts" as a result of such retained muscular tension.

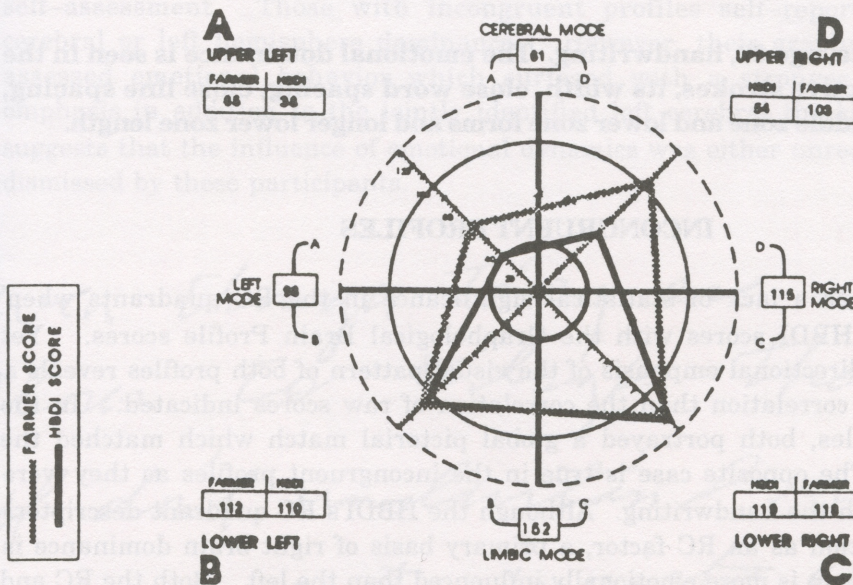
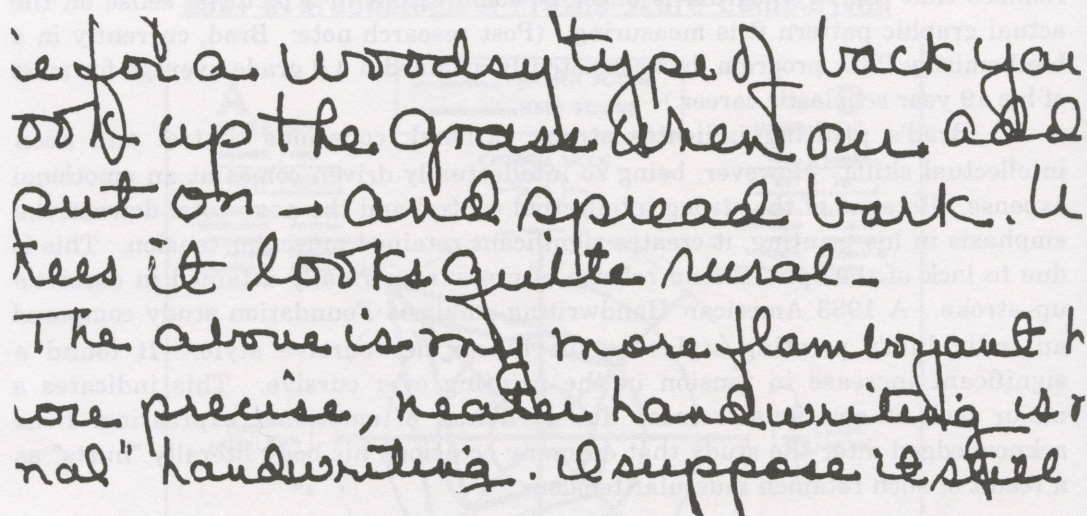


Figure 7: Olivia, age 62, former teacher. Superimposed profiles reveals limbic dominance. Note the very similar graphic plot in the hierarchy-ordered four quadrant matches, i.e., C, B, D, A.



ie for a woody type of bark you
 took up the grass when on. add
 put on - and spread bark. U
 sees it looks quite rural -
 The above is my more flamboyant h
 ore precise, neater handwriting is r
 nal" handwriting. I suppose it still

Figure 8: Olivia, age 62, handwriting. The emotional dominance is seen in the garland connective strokes, its width, close word spacing, close line spacing, rounded, full middle zone and lower zone forms and longer lower zone length.

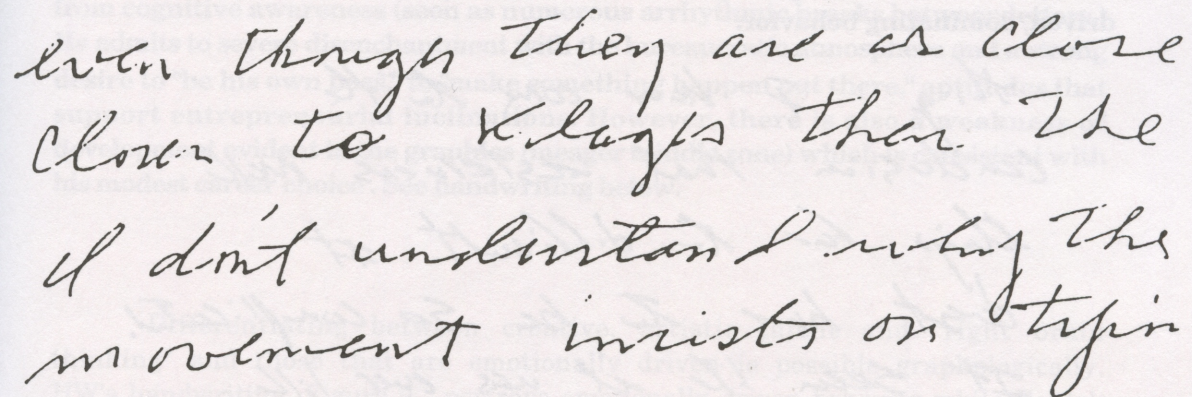
INCONGRUENT PROFILES

There was a lack of statistical significance in the RC quadrants when comparing the HBDI scores with the Graphological Brain Profile scores. Yet comparing the directional emphasis of the visual pattern of both profiles reveals a stronger visual correlation than the correlation of raw scores indicated. In the congruent profiles, both portrayed a global pictorial match which matched the handwriting. The opposite case is true in the incongruent profiles as they were incongruent with the handwriting. Although the HBDI's RC quadrant descriptors do not list emotion as an RC factor, a primary basis of right brain dominance is that the right brain is more emotionally influenced than the left. Both the RC and RL quadrants are emotionally influenced but correlate with a distinctly different movement style. While handwriting's content is consciously produced, its emotionally contracted or released movement pattern is unconsciously (emotionally) influenced. Pophal's criteria of dynamic, abundant, irregular movement is a primary indication of emotional drive. This need to freely experience emotional release, surfaces in expressive, emotionally driven

behavior, and was slotted in as an RC variable. This factor surfaced strongly in the incongruent profiles.

Herrmann's data identifies creative, artistic, marketing talents, "what ifing", speculative and futuristic thinking as a right cerebral cognitive style. Entrepreneurial and sales people emerge there, but Herrmann makes no distinction between the types. However, graphologically, the dynamics of emotional driven people can be differentiated from those driven by more cognitive and creative factors. Thus, two different movement styles, one cognitive and one more emotional, could be found in the RC graphological quadrant, but not found as readily in the RC HBDI. (Post research discussion with Herrmann revealed that the HBDI does not assess behaviors in the HBDI RC quadrant.)

Recognized pitfalls of self-assessment by participants' lack of self-knowledge or over-estimation also surfaced. While only 1 of the 30 females produced an incongruent profile, 7 of the 17 males (41%) produced mis-matched profiles. One male revealed strong artistic/creative potential unrecognized by self-assessment. Those with incongruent profiles self-reported strong left cerebral or left hemisphere dominance. However, their graphological profiles assessed emotional behavior which surfaced with a stronger right cerebral emphasis in addition to the jointly identified left cerebral thinking style. This suggests that the influence of emotional dynamics was either unrecognized, and or dismissed by these participants.



even though they are as close
 closer to Klags than the
 if don't understand why the
 movement insists on typing

Figure 9: HW's handwriting features erratic, dynamic, angular, thrusting movement with strong pressure, a bouncy baseline, varying letter size and word spacing. It indicates emotionally charged behavior rather than creativity.

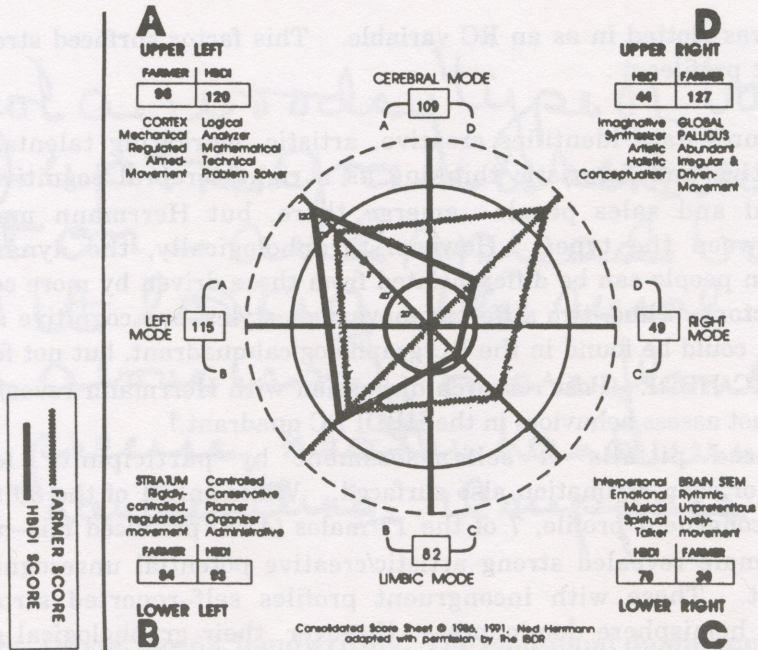


Figure 10: HW, PhD. 72, right handed engineer. Superimposed handwriting/HBDI profile is incongruent. He identified himself as a strong left cerebral (LC) thinker and his handwriting profile pattern showed a completely different quadrant as dominant. In revealing the same strength of left cerebral thinking skills, it defined a stronger right cerebral (RC) emphasis due to his emotionally driven, dominating behavior.

thing. I have come to the
conclusion that asternous well
things are so difficult. It
don't have to be so complicated.
It seem like it was ever 1/16

Figure 11: CF's handwriting. Irregularity in this writing indicates considerable emotional sensitivity (irregular slant and middle zone, lower zone length, bouncy baseline) coupled with an upper zone (conscious) emphasis and emotional drive that underscores an entrepreneurial spirit.

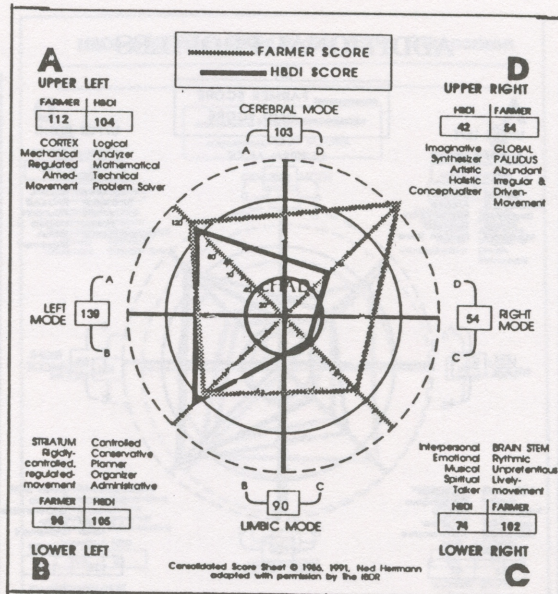


Figure 12: CF, male, 22 yrs. This incongruent profile reveals that he self-assessed strong LC analytical thinking skills and LL controlled, planning organizational skills typical of a young bank examiner. On the other hand, the handwriting profile shows more emotional sensitivity than he was willing to admit/recognize. His writing reveals an intensity of emotional drive, blocked from cognitive awareness (seen as numerous arrhythmic breaks between letters.) He admits to severe disenchantment with the bureaucratic atmosphere and a strong desire to "be his own boss," to "make something happen out there," aptitudes that support entrepreneurial inclinations. However, there is also a weakness of development evident in the graphics (meager middle zone) which is consistent with his modest career choice. See handwriting below.

Differentiating between creative, artistic talent and "right brain thinking" and those that are emotionally driven is possible graphologically. HW's handwriting, Figure 9, portrays emotionally driven behavior while Paula's very rhythmic handwriting, Figure 13, below, is a clear example of a creative, artistic, synthesizing, conceptualizing right brain thinking style.

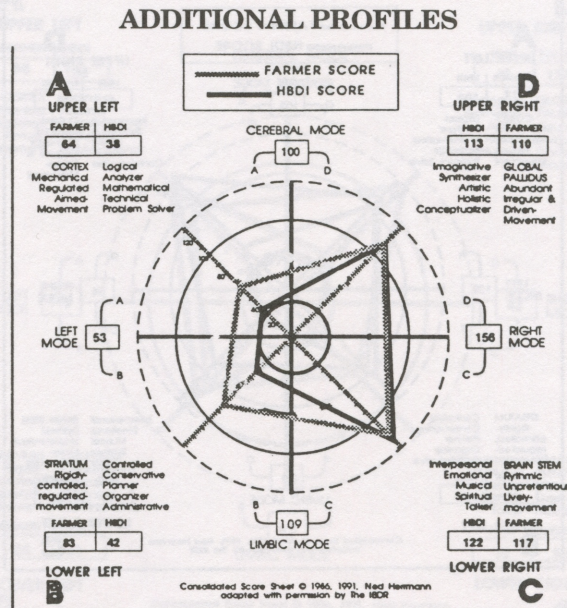


Figure 13. Paula, RH, 29 yrs. Superimposed profiles show strong right brain dominance, and excellent congruence between her self HBDI and handwriting score.

mine. I always admired his sense of artistry in home building. The back patio looked over a wide, open field surrounded by cottonwood trees. At night pheasants would

Figure 14: Paula's handwriting reveals a highly rhythmic, facile, integrated fluidity of movement which carries her natural intuitive sense and multi-talented creative flair. It is a prime example of great flexibility which is indicative of enhanced inter-hemispheric communication processes.

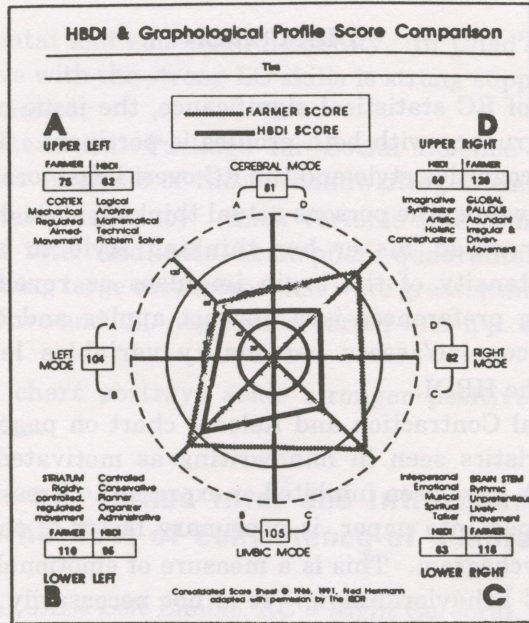


Figure 15. Tim. Graphological profile identified unrecognized artistic, creative potential, (emphasis on RC quadrant), while he identified left brain dominance due to managerial duties. Handwriting features free, spontaneous, emotionally vibrant, rhythmic movement which reveals the artistic potential. When quizzed, he revealed he enjoyed drawing.

Constitution proclaims that every man,
regardless of race, creed or religion has
certain inalienable rights to the pursuit
of 'Life, Liberty and the pursuit of Happiness'.

Figure 16. Tim's handwriting.

DISCUSSION

Despite lack of RC statistical significance, the issue of the handwriting's congruency or incongruency with both profiles is pertinent. The primary issue is that the RC internal cognitive style and the RC overt behavioral/social style, are not comparable. In other words, the persons actual thinking style did not correlate with how the person *perceived* his or her thinking style to be. Measuring the organization and intensity of the brain impulses as revealed in handwriting versus self-reporting preferences is a distinct apples and oranges issue. The graphologist can recognize/assess personality variables left unrecognized by self-reporting or by the HBDI.

The Emotional Contraction and Release chart on page 4 provides a list of behavioral characteristics seen in handwriting as motivated by the demand of strong emotions which have been inhibited or expressed. Pressure, the result of the writer pressing the pen into paper, is a primary factor of the emotional release dimension on the Psychogram. This is a measure of emotional depth and provides the drive for the RC behavioral style. It is not necessarily a component of RC cognitive style. In general, the behavioral and the cognitive style of the Right Cerebral can be defined separately as follows:

BEHAVIORAL STYLE

Outspoken/assertive
Impulsive
Dominating/tends to be pushy
Action-oriented
Strong-willed

HERRMANN'S COGNITIVE

Creative
Conceptualizing
Synthesizing
Artistic
Holistic

Essentially, the right brain's creativity is shown by the fluidity of movement which represents an integration of the intellect and the emotions. Left brain thinking is revealed by more restricted movement, reflecting more rigidity of thinking and behavior. The August, 1991, *New Sense Bulletin* reported a study by Ingegerd Carlson of Lund University in Sweden. Carlson tested 84 undergraduate students and found that the highly creative people in the pool reacted flexibly and did not have rigid hemisphere-specific reactions. In short, they were less programmed (less rigidly wired) in calling up left hemisphere-specific defenses. HW's writing is a prime example of rigidity of thinking and a lack of rhythmic emotional integration while Paula's and Tim's writings are prime examples of an internalized rhythmic integration and flexibility in the free flowing movement. Dominance patterns that feature a more equalized balance

indicates greater mental and emotional flexibility. In Chad's case, combining his strong emotional drive with the strong LC skills is strong support for him to see his RC ambitions materialize.

Using the Statistical Package for Social Science (SPSS) software, a Principal Components Analysis of the 89 handwriting variables was done. This was a test of internal consistency. Each variable was compared against every other variable in the inter and intra-hemisphere quadrants. This test produced 6,000 correlations. Using large case scores that were greater than 25, there were 405 correlations, 255 positive and 150 negative, occurred with a $p = <.05$.

The following chart portrays some stronger positive correlations of the handwriting variables.

Chart 1: Samples of Positive Inter and Intra-quadrant Correlations in SPSS Internal Test of Consistency of Quadrant Variables.

(LC = Left Cerebral, LL = Left Limbic, RC = Right Cerebral, RL = Right Limbic)

1.	LC to LC	Simplification to Word Spacing > than 5	.006
2.	RC to RC	Pressure > 5 to irregularity	.001
3.	RC to RC	Flexibility to Originality	.014
4.	LC to LL	Rigidity to Angularity	.009
5.	RC to RC	Expressive to Driving movement	.015
6.	LC to LC	Connectedness to Simplification	.022
7.	LC to LL	Angularity to Tension	.004
8.	RC to LC	Originality to simplification	.004
9.	RC to RC	LZL > 5 to Irregularity	.018
10.	RC to RC	LZL > 5 to Expressive	.002
11.	LC to LC	Connectedness to Alignment	.034
12.	LC to RC	Tension to pressure > 5	.046
13.	RC to LC	Pressure > 5 to Angularity	.001
14.	RL to RL	Soft rounded forms to moderate fullness	.032
15.	RL to RL	Triangular MZ to soft rounded forms	.024

This chart depicts positive correlations of the graphological variables. See discussion of some of these below. (LZL = lower zone length; MZ = middle zone.)

Several highly significant statistical correlations occurred that identified major handwriting variables in the intra-quadrant or inter-hemisphere comparison. As most variables are Psychogram indicators with a contracting or releasing influence, these supported the validity of the graphological premise of emotional contraction or emotional release as a principle factor of brain dominance. The left brain measures objective thinking and the right brain the subjectivity of emotion. This does not imply, however, that the 40 Psychogram indicators only have a single quadrant influence. As the Psychogram is a global personality profile, several indicators may be influential in more than one quadrant. It is the predominant influence of major factors that contributes to quadrant dominance that is significant.

Variable # 1: LC variable of simplification indicates a correlation at .006 to LC variable, word spacing (spacing between words). These are major LC intra-quadrant variables. This supports Freud's concept of sublimation of emotions as a factor in strong rational, mental control (mental discipline and/or emotional inhibition). Simplification and word spacing are major conscious thinking indicators in the Control dimension, upper left quadrant of the Psychogram. Statistically, these factors played a major role in defining dominance in the Herrmann left cerebral quadrant. Simplification, as a measure of clean, efficient, streamlined thinking, is scored by how the writer simplifies the writing, (e.g., the ability to discard non-essentials strokes taught in the copybook model). Wider word spacing reveals the need for clarity and objectivity of the thinking processes and/or the need for emotional distance.

Variable # 2: RC variable of pressure (depth into the writing page) greater than 5 and RC variable of Irregularity correlated at .001. Both are indicators in the Emotional Release dimension of the Psychogram. This intra-quadrant correlation strongly supports the graphological interpretation that emotional intensity and depth is seen in heavy pressured writing. Irregularity of the movement signifies stronger emotional strength and drive. This is a primary component of the entrepreneurial/sales capacities as well as the creative influences.

Variable # 3: RC variable of Flexibility to RC variable of Originality (cognitive/emotional drive to be individualistic) is strongly correlated at .014. Flexibility is indicative of a willingness and propensity to adapt, to mentally bend and flex, which is a recognized right brain function.

Variable # 4: LC variable Rigidity to LL variable Angularity are both constricting/contracting factors (on left side of the Psychogram) which correlate at .009. Strong angularity contributes to a stronger score for Rigidity, a Psychogram indicator.

Variable # 15: RL variable triangular middle zone to RL soft rounded forms correlated at .024. Triangulation of the middle zone is reflecting in the handwriting when the letters decrease in size as it moves to the right. This is deemed as diplomacy in approaching people and the world. The soft rounded forms portray a gentle demeanor. These factors contribute to the interpersonal skills that are integral to the primary influence of the Right Limbic quadrant.

The strongest support for the hypothesis that emotional contraction, or suppression of affect, versus emotional release in handwriting's movement is the central factor in brain dominance is found in the negative correlations. Further, specific handwriting factors seen in contracted movement denote the influence of intellectual control or inhibition of emotion for left brain objectivity. Conversely, released movement indicates the energized flow of emotions as a primary indicator of emotional drive in right brain dominance. Essentially, regularity of movement portrays objective thinking versus the irregularity of movement which portrays subjective influences that direct behavior. Examples of negative correlations of variables in opposing quadrants are seen below:

**Chart 2: Samples of Negative Correlations in
Internal Test of Consistency of Variables**

LC=Left Cerebral, LL=Left Limbic, RC=Right Cerebral, RL=Right Limbic

1.	LC to RC	Regularity to Irregularity	-.004
2.	LC to RC	Right Slant < 5 to Lower Zone Length > 5	-.032
3.	LC to RC	Simplification to Lower Zone Length > 5	-.014
4.	RL to LC	Close tangled lines to Regularity	-.015
5.	RC to LC	Originality to connectedness	-.004
6.	RC to LC	Expressive movement to Alignment	-.004
7.	LC to LL	Simplification to Slowness	-.031
8.	LC to RC	Alignment to Close, dense lines	-.006
9.	LL to RC	Alignment to Expressive movement	-.004
10.	LC to RC	Sharpness to Pressure > 5	-.008

Negative correlation variable # 1: Regularity (left cerebral) to Irregularity (right cerebral) are bi-polar Psychogram indicators. Regularity is in the Control dimension and Irregularity is in the Emotional Release dimension. This is a measure of clarity and controlled thinking (contracted left brain thinking) versus the need to experience and express, i.e., release, emotions that produces emotional influenced behavior (released right brain behavior). When one score is high, the other is low.

Negative correlation variable # 2: LC Right Slant < 5 variable (emotionally contracting) has a $-.032$ negative correlation to RC Lower Zone > 5 variable. This is another direct thinking versus emotional drive factor. Both of these factors are Psychogram indicators.

Variable # 3: Simplification (LC) has a $-.014$ correlation to Lower Zone Length (RC) > 5. This is another direct thinking (conscious need for streamlined mental efficiency) versus the driving unconscious need for activity which underscores emotional drive.

Variable # 4: RC variable of Close tangled lines, a subjective thinking influence, has a $-.015$ correlation to Regularity (LC), a major factor of mental control and objective thinking.

Variable # 5: Originality (RC) which supports strength of individualistic thinking and behavior has a $-.004$ negative correlation to Connectedness (LC), which measures the need for associating concepts in logical thinking.

After the Principle Component Analysis was completed, quadrant scores were totalled for input to the factor analysis. (Factor analysis is a multivariate statistical method commonly used in both internal and external construct validation studies. Interpretation of the results indicated that handwriting can separate and identify cerebral (conscious) factors from limbic (emotional-unconscious) factors for brain dominance.

Zuckerman (1991, pg. 143) indicates that nearly 100 years ago Freud identified the primary and secondary thinking processes which he renamed the unconscious and conscious. In describing the processes, Zuckerman stated, "The primary process is more immediately reflective of basic emotions. We might equate the secondary process with left-brain function and primary process with right-brain functioning and therefore expect to find more emotionality more directly expressed in right-hemisphere function." This can be directly tied to regularity, as an indication of control, versus irregularity, as an indication of

emotion, of the movement pattern. This is reflected by the negative correlation #1 from Chart #2.

This study suggests psychological correlates to handwriting factors are grounded in neurophysiological processes. Negative correlations attained in this study are statistical support for Pophal's graphological research in defining the brain's objective/subjective mental processes. Pophal identified the motor centers of the cortex and striatum as governed by strong constricted motor influence related to control, whereas the global pallidus, located deeper in the limbic system or emotional brain, which produces greater expression and irregularity in the movement. At his death in the late 1960s Pophal was on the brain science frontier in his handwriting studies. He pioneered the neurological connection of movement to the dynamics of emotional expression and fine motor control. Lack of access by English speaking people to his complex physiological/graphological research has restricted the American scientific community from building on that research. The *Handwriting Analysis Research Library, Graphological Abstracts, Volume I* (1927–1966), lists ten research projects by Pophal.

Despite 75 years of respectable European research grounded in handwriting's link to neurophysiology, well designed psycho-physiological studies are relatively few and recent in the United States. As Dr. Bernard Nevo stated in *The Scientific Aspects of Graphology*:

Scientific handwriting psychology today is a neglected area; it was banished to the far corner of the academic arena many years ago, and has remained there. It is typical that not a single comprehensive textbook on handwriting behavior research has been published until now. (1986, vii)

Brain science research has defined the basic pattern of the neural firings as an inhibitory or excitatory basis that generates brain wave activity. Richard Restak, M.D., in *The Mind*, indicates, "A neurotransmitter exerts either an excitatory effort on the target neuron, causing it to fire, or an inhibitory effect, preventing it from firing" (Restak, p.40). Since handwriting offers a *uncontaminated, unfiltered* perspective on thinking, personality and behavior, to continue to ignore the potential of such a potent resource as technical graphology is inconceivable. As a sophisticated "on line" product, mediated by neurological processes, it is a sensitive seismograph of a working brain – a visible and measurable mind/body connection. Delivering a "snapshot" of the "anatomy of the unconscious" at the time of writing, it has the capacity to define the three facilities of the human mind:

- its cognitive, or thinking (governing action)
- its affective, or feeling (emotion)
- its conative, or intention to act (action)

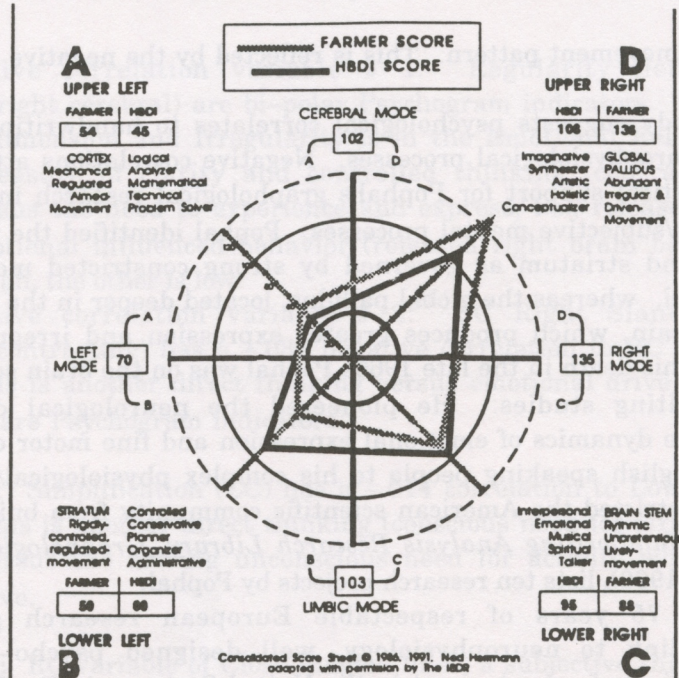
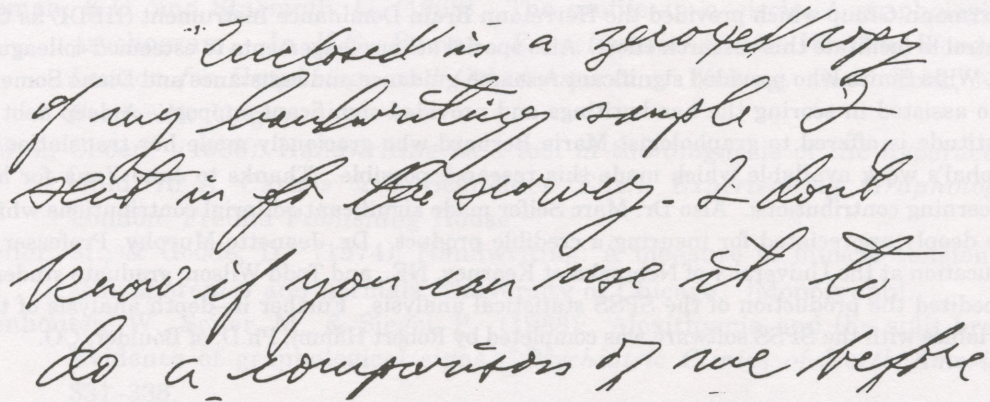


Figure 17: Curtis, 62, CEO, superimposed HBDI and handwriting profile.

Its ability to unobtrusively track the emotional dynamics on a longitudinal basis is unique for verifying and evaluating therapeutic change and in monitoring drug studies with cost effectiveness. With the medical need to identify and measure the impact of emotional dynamics on health, brain science and neuropsychology should link forces and conduct neurographological research to elevate a greater scientific understanding of personality through this uncommon perspective.

Although the Myers-Briggs Psychological Type Instrument was not used as a measure on this research, in view of the HBDI's strong correlation to the Myers-Briggs, the descriptions of the Jungian functions of Thinking, Sensing, Intuiting and Feeling cognitive styles can also correlate easily with the topologies used in developing the graphological profile. In fact, these factors were used as a general guide in assembling the variables of the handwriting profile quadrants. Interestingly, Pophal identified the typology of his "brainstem" writer (the right limbic in this research) as "altruistic, with a love of fellow man", remarkably similar to the Myers-Briggs Feeling type.

A handwritten note in cursive script, slanted to the right. The text reads: "Inclosed is a zeroed copy of my handwriting sample I sent in for the survey. I don't know if you can use it to do a comparison of me before". The ink is dark, and the paper appears slightly aged. The handwriting is fluid but shows some irregularities in line thickness and slant, consistent with the description in the caption.

Inclosed is a zeroed copy
of my handwriting sample I
sent in for the survey. I don't
know if you can use it to
do a comparison of me before

Figure 18. Curtis's handwriting is a classic example of emotional drive characterized by Pophal's "global pallidus" factors, a major motor center in the limbic area of the brain. Its strongly right slanted, irregular driven movement portrays the dynamic intensity of his emotional responsiveness and emotional sensitivity. Dynamically alive and vibrant, his behavior is motivated by the need to connect emotionally with people and the world outside himself. The irregular movement indicates an emotional sensitivity that also carries an innate sense of intuitive thinking and empathy. The HBDI C quadrant carries spiritual concerns as one of its major factors. Post research feedback from a person who knew him well indicated his empathy, spiritual orientation and humanitarian concerns were a source of emotional trauma for him in the necessary personnel downsizing of his business. The drooping baselines indicate his fatigue and/or depression. However, dominance is never a single quadrant issue and the strongly connected writing indicates strong left cerebral logical thinking.

Special acknowledgement goes to the American Handwriting Analysis Foundation of San Jose, CA. which provided two grants for this research and the Ned Herrmann Group which provided the Herrmann Brain Dominance Instrument (HBDI) as the control to facilitate this research effort. Also special acknowledgements to esteemed colleagues Dr. Willa Smith who provided significant research guidance and assistance and Diane Somers, who assisted in scoring the handwritings and provided significant support. A deep debt of gratitude is offered to graphologist Marie Bernard who graciously made her translation of Pophal's work available which made this research possible. Thanks to Jane Yank for her discerning contributions. Also Dr. Marc Seifer made significant editorial contributions which are deeply appreciated for insuring a credible product. Dr. Jeanette Murphy, Professor of Education at the University of Nebraska at Kearney, NE., and Todd Wilson, graduate student, expedited the production of the SPSS statistical analysis. Further in-depth analysis of the variables with the SPSS software was completed by Robert Hamm, Ph.D. of Boulder, CO.

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BIOGRAPHY: Jeanette Farmer is a certified handwriting movement specialist. She is board certified by the American Handwriting Analysis Foundation (AHAF), certified in the Roman/Staempfli Psychogram method and a member of the American Board of Forensic Examiners. In 1992, she received the Special Achievement Award for handwriting and brain research from AHAF. Founder of the Rocky Mountain Chapter of AHAF in 1983, her publications include *Handwriting Movement: The Physiological/Psychological Link to Brain Dominance and the Cognitive Styles*, an expanded version of this research. A program based on this research is used by special education teachers with at-risk students (Attention Deficit/Hyperactivity Disorder, learning disabled) to regulate impulsive behaviors.

194 January 1982

Dear Marie —

I read your history of graphology in Margjoni Westberg's book. I don't believe that you have learned something of Bunker's book, it is so primitive and together with all the brilliant researchers you mentioned he really deserves his place only because he brought the graphological interest to America. But the commercial outcome is enormous. Thanks for your lecture and forgive my uncontrolled wild behavior. I know I am awful
 Your Marie Bernard.

Marie Bernard was known for her provocative lectures on sexual deviance. Highly melodramatic, sometimes she got carried away with herself. Note her pastose writing, large lefttending oral hooks and also great variation in the lowerzone (e.g., separated y in "graphology" line 1; foreshortened p in "graphological" line 6). The odd indentation on the left margin refers to her ability to establish her own parameters. A bold extravert, Marie always had the ability to obtain handwriting samples of many key world leaders. The world will miss Marie Bernard.

VALUE OF GRAPHOLOGICAL TRAINING FOR THE HANDWRITING IDENTIFICATION EXPERT

Patricia Siegel

Presented at The American Society of Professional Graphologists, February, 1994

ABSTRACT: Handwriting identification experts generally come from either of two backgrounds, those trained by the government specifically in document examination and those trained from a graphological perspective. Each has experience in observing the detailed graphic components of handwriting, but graphologists emphasize viewing the details within a broader context than do government trained experts. Graphologists are trained to evaluate the expressive entirety of writing. This provides a wide frame of reference for analyzing the dynamic individuality in handwriting, thereby reducing chance of error in making an identification.

THE ISSUE OF TRAINING

The handwriting identification expert who is a graphologist discovers early on that graphology can become a handicap in the courtroom due to uninformed negative perceptions about graphology in the legal community. Questioned document experts trained in handwriting identification by police departments or other government agencies, who have not studied graphology, are often thought of as the pure experts. The purpose of this paper is to challenge the perception that graphological training has little relevance for handwriting identification and, also, to demonstrate that graphological training improves the understanding and accuracy of the identification expert. Such training adds another dimension to the analytical process and is superior to instruction which ignores the psychological factors influencing graphic movement.

A handwriting identification expert compares different samples of writing to determine whether they were written by the same person. The graphologist or handwriting analyst is primarily concerned with evaluating the personality of the writer. The methodology applied by a handwriting identification expert in coming to an "opinion" is essentially different from that used by a graphologist in

developing an "analysis." Yet, the handwriting itself and the graphic manner in which it is delineated is the same for both methods of evaluation. There are in fact, common tasks that the handwriting identification expert and graphologist perform, such as those of observation, measurement, and evaluation of motoric response.

There is general skepticism in the American community about the accuracy of graphological analysis relative to personality descriptions. Europeans, who have had long-term exposure to well-trained graphologists, are much more accepting of it as a diagnostic technique. The focus here is not to defend handwriting analysts' personality evaluations, except to point out that graphology is based on a large body of systematic research and study going back to the 1800's. The first book on the subject actually appeared as early as 1622.

Psychological influences on handwriting have been recognized by well known handwriting identification experts. Hanna Sulner writes in *Disputed Documents* that examination of handwriting may be used to determine the mental state of the writer, and A. J. Quirke devotes a chapter to "The Psychology of Handwriting" in *Forged, Anonymous and Suspect Documents*. Karl Aschaffenburg, a document examiner who was initially trained as a graphologist, states that the "forensic examination of documents and what is called 'graphology' are simply two branches of the same root: the analytical exploration of the handwriting itself."

In a recent text, *Fundamentals of Document Examination*, Edna W. Robertson writes, "A review of the literature indicates that handwriting experts in a number of cases have testified as to the writer's state of mind." In the classic text, *Law of Disputed and Forged Documents*, J. Newton Baker states, "Proceeding on the basis that all impulses directing action come from the intellectual faculty of the individual and that every movement, therefore, is controlled by his mental condition, it is indisputably true that a person's mental condition must have a very decisive influence on the character of his writing. This feature has often been confirmed and proved conclusively by circumstantial evidence in legal controversies."

There is also more recent judicial precedent for recognizing the psychological influences behind handwriting. The Council of Graphological Societies published a list of court cases in which handwriting experts have testified about the mental state of the writer.

Perhaps the most comprehensive explanation of the benefits of graphological study for the questioned document expert is the article "Behavior Factors in Handwriting Identification," written by the late Dr. Ari Naftali and published in *The Journal of Criminal Law, Criminology and Police Science*. Dr.

Naftali was a physician, graphologist/handwriting identification expert, and one-time head of the Criminal Identification Bureau and Laboratories of the Israeli Police. He states, "Although there is general agreement that individuality of handwriting is somehow related to the unique personality pattern of the writer, the forensic examiner of Q.D. (questioned documents) is still shying away from the utilizing the findings of the more serious students of handwriting as a medium of personality assessment...It would certainly be useful, for example, to be able to distinguish between natural expressive movements and 'role-playing' in handwriting, an achievement better accomplished with the aid of serious graphology."

My objective is to explain what graphologists learn and how this knowledge empowers the handwriting identification expert with greater understanding of how writing is achieved. Graphological training enables the identification experts to approach handwriting from a wider scope than those from government backgrounds. This is a generalization, of course, but it is important that the graphologist is trained to look at handwriting as a dynamic process which changes with time and specific situations but also maintains an inherent consistency of structure which expresses the individuality of the writer. The graphologist is trained to look at writing globally and to evaluate individual details and micro movements as they relate to the whole. The neurological complexity which produces handwriting, with its physical and psychological determinants, demands attention to a broad perspective. Without such breadth, the identification expert may miss important cues in coming to a conclusion.

The basic roots of the word "graphology" mean the study of handwriting, and graphologists study the entirety of handwriting -- the letter, number and diacritic forms; the spacial patterns and proportional relationships; the direction and movement of the ink trail; and the texture, speed and pressure of the pen stroke. The graphologist is trained to understand the neurological influence of handedness on the writing trail, and of hand hold and paper position as they relate to the resulting graphic projection. Most important, along with measurement and observation of details -- such as size and proportion of letters, spacial distances, alignment and relative degree of letter slants -- the graphologist is trained to look at the stylistic and expressive aspects of the writing, the maturity of the writing, and to study the impetus behind the graphic gesture.

Handwriting is a three dimensional trail of movement frozen in time and space and one of the most complicated tasks we learn. It involves intricate muscle coordination, concentration on approximating model letter forms and the simultaneous organization of the page -- writing in straight lines with correct word and letter sequencing.

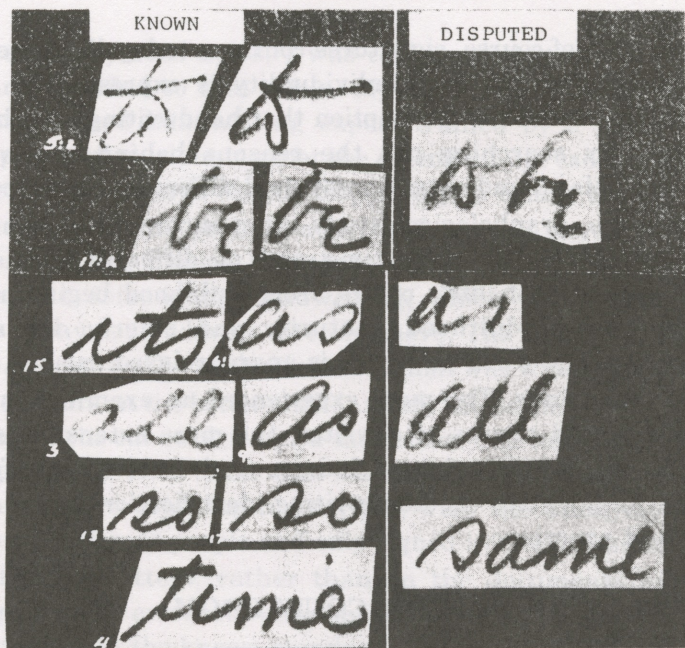


Figure 2. Ordway Hilton exhibit, comparison of words in known and disputed writings.

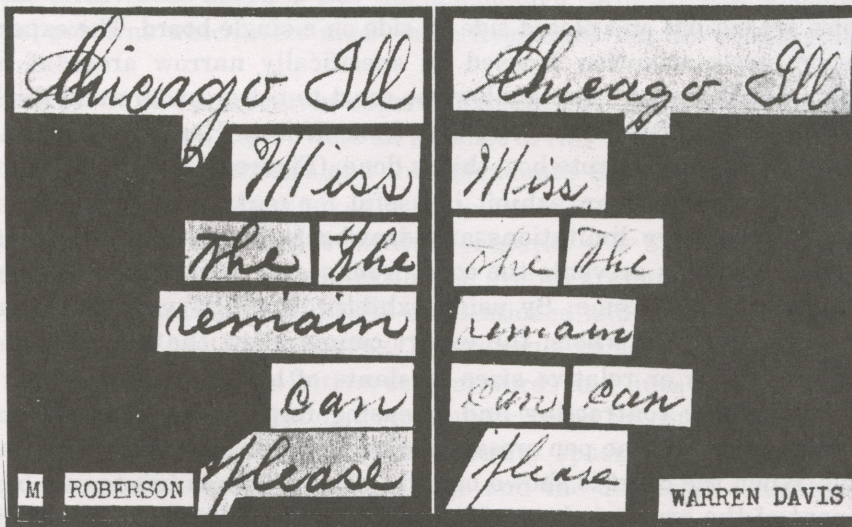


Figure 3. Ordway Hilton exhibit of comparison of words of allegedly two different individuals. Because of the great similarity in writings, it was concluded that they were one and the same person.

Roman Empire. And, of course, signatures continue to legally represent the writer. The graphological principle that individuality is expressed in handwriting is precisely what lies behind the assumption that handwritings can be identified one from the other. By searching out the reasons behind the writing process, graphologists are able to understand individual differences more completely.

Furthermore, graphological study often incorporates examining various samples of a single person over time and at different moments or moods. Handwriting changes with life's cycles, from childhood beginnings through the teenage years, young adulthood, maturity and elderly decline. A subject's handwriting can change when he or she is angry, relaxed, rushed, fatigued, ill, or after having a few drinks. The more experienced an examiner is at scrutinizing the different faces and phases of a writer, the more extensive is an examiner's mental data base for recognizing changes and habitual unifying dynamics. Graphological training gives the handwriting identification expert a great breadth of knowledge and experience.

IN THE COURTROOM

Traditionally and typically, handwriting experts prepare exhibits for court in which individual letters and words from questioned and known writing samples are cut out and placed side by side on a single board. The experts want the judge or jury's attention focused on specifically narrow areas of comparison. Exhibits clarify testimony and allow the court to better understand the basis for an expert's opinion. Two examples, one from Wilson Harrison and another from Ordway Hilton demonstrate how this is done. (Figures 1 and 2.)

Although such an exhibit is useful for portraying specific details of the writing, it can have limitations and drawbacks in certain situations. Isolating individual elements prevents the court from seeing the stylistic environment from which these details come. By using exhibits in which words and sentences are fragmented from the whole, the expert cannot show the full trail of movement, spacial dynamics or relative sizes or slants of letters, to name just a few. The continuity of the contracting and releasing finger movements, which create a rhythmic pattern as the pen crosses the page, cannot be presented in a segmented exhibit. When the court is shown only fragments, it then has to rely on the *unseen* judgment of the experts' observation of the whole. The court cannot directly view whether this judgment is reasonable.

This is particularly pertinent when identifying the writer of anonymous notes where, very often, there is an attempted disguise. For example, as a witness in a case in which there were two conflicting expert opinions regarding the author

of several printed anonymous notes, I was convinced that the defendant did not execute them and testified to that effect. My background includes graphological training. An experienced handwriting expert trained by a government agency testified for the prosecution, claiming that the defendant did execute the notes.

The prosecution expert's exhibit consisted of a board, the top half of which displayed an enlarged hand-printed address from the envelope of one of the anonymous notes. On the bottom half there were cut out letters, also enlarged, supposedly from the defendant's handwriting, which were pasted in the same positions as the anonymous address directly above. The expert for the prosecution claimed that the address on the top half of the exhibit was written by the same person who executed the letters on the bottom half, namely the defendant.

Only a few of the cut out letters on the bottom half resembled the defendant's printing, however. It was clear to me that most of the supposedly known documents the prosecution's expert used for comparison with the anonymous notes were executed by several different people and only signed by the defendant. By narrowly focusing on individual letters, rather than on the documents as a whole, the prosecution's expert made erroneous assumptions. A jury would not be able to detect different writing styles in the known standards by looking at isolated letters on his exhibit. In addition, the comparison letters were applied to the exhibit in a similar manner to the anonymous address. But the defendant's printing had spacing and organizational patterns which were much more irregular than the printing on the anonymous notes.

In contrast to the prosecution expert's exhibit, the exhibits I prepared for testimony as the defendant's expert were an attempt to reflect the expressive writing styles on both the anonymous notes and the defendant's known standards. Entire pages of anonymous notes (also referred to as questioned documents) were placed next to full pages of the defendant's printing (Figures 4 & 5). The presentation focused on specifics but within the context of the overall graphic patterning on the page. In another exhibit, (Figure 6) blocks of questioned and known writing were enlarged and contrasted so that individual letters could be seen more clearly. Yet, the spacial relationships between letters, several words and lines remained true of the individuality of the writers. No distortion was created by cutting out separate letters and pasting them on a board with arbitrary spacing determined by the expert. The density of the writing on the page and the degree of consistency of organization is retained when blocks of writing are captured as a whole. In this manner, visual bias in presentation can be reduced while allowing focus on specific details.

THIS IS A NOTIFICATION —
YOU'VE NEVER BEEN A COP AND
YOU'LL NEVER BE A DEPUTY INSPEC-
TOR ! WE TALKED TO YOUR MOTHER
IN FLORIDA AND SHE SAID NOT TO
GIVE YOU THREE-QUARTERS SINCE
YOU'RE NOT REALLY SICK. YOUR
BROTHER, THE MAN OF THE
FAMILY, WAS EVEN LAUGHING. HE
SAYS YOU WANT LINE-OF-DUTY
THREE-QUARTERS WHEN YOU NEVER
DID LINE-OF-DUTY WORK, YOU
LESS THAN A MAN. WITHOUT YOUR
CAPTAIN'S BARS, YOU'RE NOT EVEN
A WOMAN — YOU'RE A PARASITE !

YOURS TRULY,
A SECRET ADMIRER

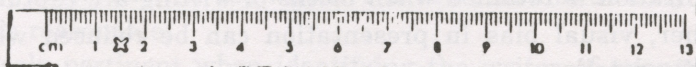


Figure 4. The questioned document, an anonymous note.

THIS IS A NOTIFICATION YOUR NAME NEVER BE A
COP AND YOU'LL NEVER BE A DEPUTY INSPECTOR
WE TALKED TO YOUR MOTHER IN FLORIDA AND
SHE SAID NOT TO GIVE YOU THREE QUARTERS
SINCE YOU'RE NOT REALLY SICK.
YOUR BROTHER, THE MAN OF THE FAMILY WAS
EVEN LUGGING. HE SAID YOU WANT LINE OF
DUTY THREE QUARTERS WHEN YOU NEVER DID
LINE OF DUTY WORK. YOU LESS THAT WITHOUT
YOUR CAPTAIN'S BARS YOU HAD NOT EVEN A
PASSAGE. YOURS TRULY A SECRET
ADMIRER.

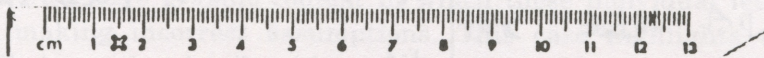


Figure 5. A full sample of known writing of the accused.

<p>PANEL D</p> <p>Q-12 QUESTIONED</p> <p>LOVE, IF YOU EVEN WITH YOUR LENGTHY (FROM WHICH YOU SHO NEVER RECOVERED) IS SHAKING IN HIS YOU MIGHT SNAKE</p> <p>Q-13</p> <p>YOUR SECRET ADMIRE</p>	<p>K-16 KNOWN</p> <p>THAT NOT EVEN AM LOVE EVEN IF YOU HA WITH YOUR LENGTHLY FROM WHICH YOU SHOU NEVER RECOVERED, CA IS SHAKING IN HIS BE</p> <p>K-17</p> <p>YINS SECRET ADMIRER</p> <p>K-18</p> <p>A SECRET ADIMIRE</p>
<p>Q-3 QUESTIONED</p> <p>WOMAN IN THE ON DUTY. YOU G HUSBAND, PICTU HEADQUARTERS, WHAT A JOKE YO.</p> <p>Q-4</p> <p>MAN. OFF THE JOB, RANK, YOU CAN'T</p>	<p>K-3 KNOWN</p> <p>WITH A MARRIED TECT WHILE ON DUTY BY HER, HUSBAND, NT TO HEAD QUATERS</p> <p>K-4</p> <p>Hi Richie, HOW DOES IT FEAL</p>

Figure 6. Enlarged segments from the questioned anonymous notes and from the known standards of the accused. Note that a comparison of the total picture of the writings, as seen in Figures 4 and 5, provide a superior basis for distinguishing the differences between the writings.

By providing exhibits in which the court could see the continuity and overall expressive style of the writing, the jury could easily see that the defendant's graphic ability was less mature, less aesthetic and far more inconsistent than that of the anonymous note writer. The anonymous notes were all written in block cap letters while the defendant combined block cap with some manuscript letters. The defendant's known handwriting contained spelling errors not appearing on the anonymous notes, and the enlargements also showed significant differences in how letters were formed. Most notably, the anonymous note writer crossed the "A"s releasing from right to left as is typical of left-handers, whereas the defendant, a righthander, crossed his A's from left to right.

The defendant could not have executed the notes because his writing was graphically inferior to the writing on the anonymous notes. One cannot disguise writing with better form and style than one is technically capable of doing. The jury was able to see the expressive differences when pertinent details were presented in the larger context and, consequently, found the defendant not guilty.

The mistake made by the prosecution's expert was not comparing standards presented as "known" documents with each other to verify that they were written by the same person. Some of the known documents were written by the defendant, but many were not. The *wrongly* identified standards contained, for instance, examples of "A"s in which the horizontal bar crossed from right to left, unlike the defendant's natural handwriting. There were many graphic inconsistencies, among these standards. Incongruities included stroke quality and stylistic expression which should have been obvious if the documents were examined and compared as a whole.

The prosecutor's expert focused narrowly on individual letters he observed while going through a large amount of employment material concerning, but not necessarily written by the defendant himself. In this case, the expert failed to evaluate the entire graphic context in which these individual letters appeared, thereby making incorrect assumptions. This case highlights the danger of myopically inspecting details without sufficient regard to the larger picture.

CONCLUSION

No handwriting identification expert is infallible, but graphological training can reduce chance of error. It is important for the handwriting expert to understand the impetus behind the graphic projection. The graphologist's training, in which similarities, differences and stylistic propensities are evaluated in terms of psychological and neurological impulse, gives the analyst a wide perspective of awareness. This, in turn, fine tunes his or her ability to grasp the individuality of handwritings evaluated for identification purposes.

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BIOGRAPHY: A graduate of Cornell University, Patricia Siegel teaches psychology of handwriting and handwriting identification at the New School For Social Research. A handwriting consultant and court qualified handwriting identification expert, Ms. Siegel has lectured in Israel, England and Washington, D.C., with publications in *Psychiatric Clinics of North America* and the text *Experiencing Graphology*. She is also a consulting reader for *Perceptual & Motor Skills*.

HIGH STAKES THE GAMBLE FOR THE HOWARD HUGHES MORMON WILL

Marc J. Seifer, Ph.D.

Book Review and Commentary

ABSTRACT: In the late 1970's, the Howard Hughes Mormon Will was ruled to be a forgery. Nevertheless, the attorney who defended the will, Harold Rhoden, disagreed with the decision. This paper will summarize Rhoden's findings, as espoused in his book, *High Stakes*. Graphological evidence will be provided to support these conclusions.

INTRODUCTION

In 1980, Harold Rhoden, the attorney who unsuccessfully defended the Howard Hughes Mormon Will, wrote the book *High Stakes*, which recounted his entire involvement. The case was tried four years earlier in 1976, when Rhoden was hired by his friend, Noah Dietrich, Howard Hughes' longtime right-hand man.

It was said that the success of this billionaire was due to eighty percent Dietrich and twenty percent luck! Hughes, who made his fortune with his father's oil drilling bit patents, was unable to share his wealth with Dietrich. Having asked for a bonus of a paltry million dollars, and having been turned down by the greedy Hughes, Dietrich quit. The year was 1958. He had served his master well for thirty years, had made numerous illegal pay-offs to the upper strata of American government, and built up the Hughes Tool Company into one of the most successful enterprises in the world; but he would help Howard Hughes no more.

Hughes, who literally told Dietrich that he could not survive without him, began to recede both mentally and physically into the reclusive life of a hermit after their parting. Surrounded only by his four or five personal attendants, it has been reported that Hughes never left his hotel room, that he could live in the same suite for years at a time, that he did not wear clothes most of the time, did not shave or cut his nails, and that he did not use a toilet when he defecated! The attendants cleaned up his mess wherever he lay.

The billionaire eccentric's aides testified in court that Hughes often-times stated that he had written a holographic will, and that it was safely hidden. He said to them that although their names would not appear in the will, they would be provided for and mentioned by their job description.

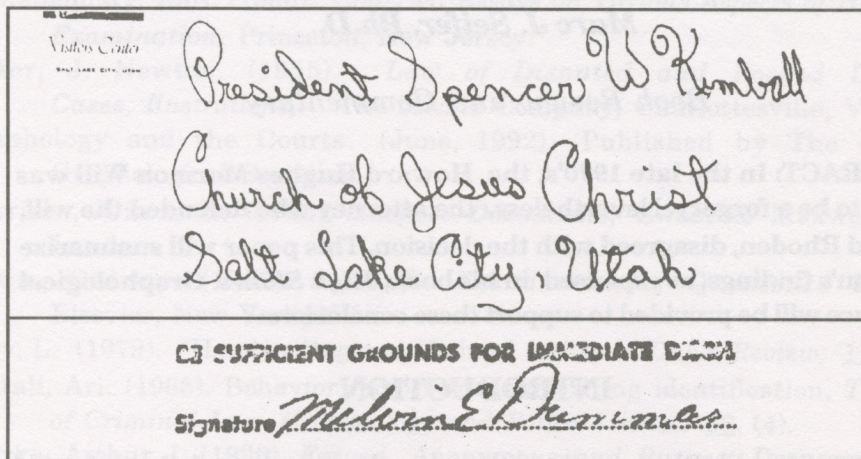


Figure 1. Outside envelope written by Melvin Dummar. His signature appears below.

In April of 1976, as Melvin Dummar reported it, a man came to his Utah gas station and delivered him Hughes will. The man told Melvin to deliver it to the proper authorities; however, instead of simply coming forth with it, Melvin disguised his handwriting on an outer envelope, Figure 1, and slipped the will into a receiving basket at the Mormon Church which was also mentioned in the document. Why was the will delivered to Melvin Dummar? Because he said, one day out on the desert, he saved a bum's life who said he was Howard Hughes!

Below is a copy of the will, Figure 5, which appeared in Rhoden's book. Before reading further, as an exercise, and as I did before continuing *High Stakes*, I would suggest that the reader take some time to study the will and compare it to other samples of Hughes' writing.

The first thing that occurred to me was how slovenly the will was. As stated by numerous QD examiners, it is filled with patching and tremulous strokes, it is written painfully slowly, and quite simply looks like a crude forgery.

However, it appears that there are a number of other samples of Hughes' writings which also display tremulous and disjointed strokes. For instance, Figure 2, below, is a sample purported to be Hughes' handwriting.

One can easily see its agitated nature. This is not at all like the smoothly written Dear Chester and Bill letter that was printed in Life Magazine in January of 1971, (and which served as the template for the Clifford Irving forgery, ASPG, Vol. III) which was written years *after* the shaky sample and the will, Figure 3.

Clearly, if it could be proven that the shaky sample in Figure 2 really was Hughes' handwriting, then this would be one strong point in favor of the will being genuine. Note in particular the quavery g, line one, in the word negotiation, the patching on the c of could and the t of result, line 2, the broken or disrupted movement on the w of want, line four and the uneven connection between the e and n of identical, line three.

As Dietrich, Figure 4, is named executor of the Mormon Will, Harold Rhoden, his attorney, became involved in the case. Naturally, if the will was genuine, Rhoden, as legal executor, stood to gain millions; however, he took one look at it and said outright that it was a fake. How could a genius billionaire have such a crude handwriting? It was impossible.

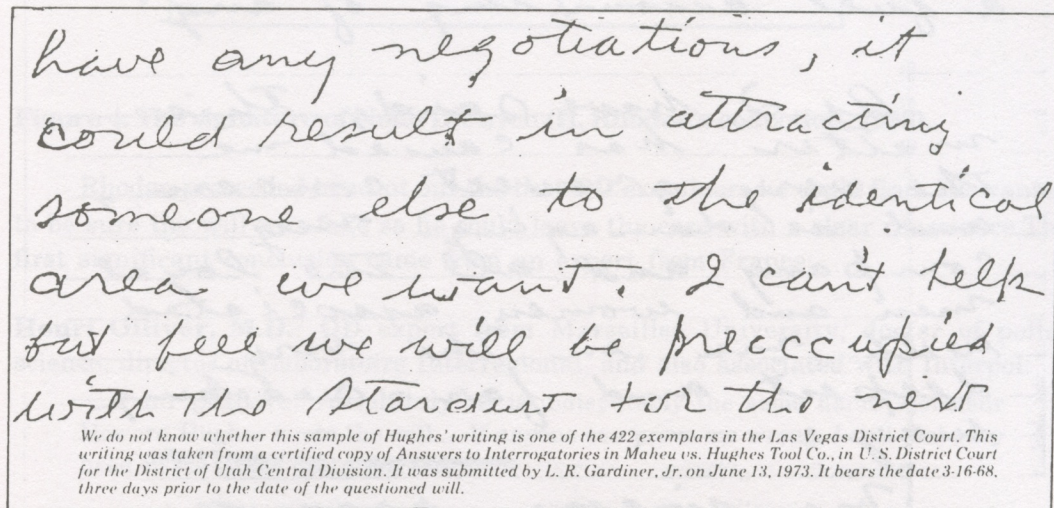


Figure 2. This sample stated to be Hughes' writing, appeared in Leslie King's *The Commentary*, (Klein, 1978, Vol. II, No. 3, p. 5.)

Dear Chester and Bill -

I do not support Waken
or Stoper in their
defiance of the Hughes Tool
Company Board of Directors,
and I deeply desire all
concerned to be fully
aware of this immediately.

I ask you to do every-
thing in your power to
put an end to these prob-
lems, and further I ask
you to obtain immediately
a full accounting of any

As I have said, this
matter has caused me
the very gravest concern,
and is damaging my
company and all the loyal
men and women associated
with me in the very
deepest and far-reaching
way.

My sincere regards;

Howard R. Hughes

Figure 3. The Dear Chester and Bill exemplar (Life Magazine, 1/1971).

Dietrich, who was in his eighties at the time, was adamant. He was convinced that the will was genuine. As he had known Hughes as a close colleague for over thirty years, Dietrich's opinion persuaded Rhoden to investigate further. Already, however, Spencer Otis, a well-respected questioned documents (QD) examiner, had announced to the press and TV cameras that it was a fake. (Apparently Otis is a composite character, predominantly Jack Harris, QD examiner from California who was hired by three sisters who were first cousins to Hughes.)* Numerous newspapers intimated that Dummur had forged it.

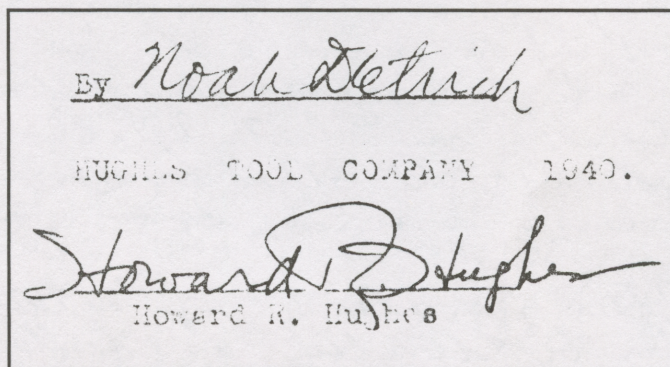


Figure 4. The signature of Noah Dietrich (H. Rhoden's collection, 1983).

Rhoden proceeded to scout out the best QD examiners he could find. He wanted to be sure the will was fake so he could leave the case with a clear conscience. The first significant conclusion came from an expert from France:

Henri Olliver, M.D.: QD expert from Marseilles University, doctor of police science, director of Laboratoire Interregional, and also associated with Interpol:

I am positive! Absolutely! It is indisputably the same hand! Monsieur Howard Hughes wrote the will.... If anyone can prove me wrong, I will place my head on the guillotine! (p. 86)

* Rhoden changed the names of some of the expert witnesses and other participants in the case for legal and other reasons. From other sources, particularly Tierney (1976) and Klein (1978) some real names have been corrected.

Last Will and Testament 21

I Howard R. Hughes being of sound and disposing mind and memory, not acting under duress, fraud or the undue influence of any person whomsoever, and being a resident of Las Vegas Nevada, declare that this is to be my last Will and revoke all other wills previously made by me.

After my death my "estate" is to be divided as follows-

first: one forth of all my assets to go to Hughes Medical Institute of Miami

second: one eight of assets to be divided among
The University of Texas
Rice Institute of Technology
of Houston -

the University of Nevada
and the University of Calif.

Howard R. Hughes

page one -

Figure 5-a. Page 1 of the QD, the Howard Hughes Mormon Will.

third: one sixteenth to Church
of Jesus Christ of Latterday
Saints — David O. McKay Pres

Fourth: one sixteenth to estab-
lish a home for Orphan
Children —

Fifth: one sixteenth of assets
to go to Boy Scouts
of America —

sixth: one sixteenth to be
divided among Jean Peters of
Los Angeles and Ella Rice
of Houston —

seventh: one sixteenth of assets
to William R. Lummis of
Houston, Texas —

eighth: one sixteenth to go
to Neilvin Du Noyer of
Gatton Nevada —

Howard R. Hughes
— page two —

Figure 5-b. Page 2 of the QD, the Howard Hughes Mormon Will.

ninth; one sixteenth to be
divided among my
personal aids at the time
of my death -

tenth; one sixteenth to be
used as school scholarship
fund for entire Country -

The spruce goose is to be given
to the City of Long Beach, Calif.

The remainder of my
estate is to be divided among
the key men of the company's
I own at the time of my
death.

I appoint Noah Dietrich
as the executor of this will -

signed the 19 day of
March 1968

Howard R. Hughes

- page three -

Figure 5-c. Page 3 of the QD, the Howard Hughes Mormon Will.

Rhoden, remained dissatisfied, and he went returned to Dietrich in order to withdraw from the case. However, Dietrich countered deftly with a persuasive argument. "Forgers don't misspell words on one page and spell them right on another," Dietrich said. "They also don't *overwrite* [retrace letters]." These features found on the Will, Dietrich said, are idiosyncracies that only Howard would be aware of. Rhoden stayed on and sought out other experts:

Pierre Faideau: QD examiner from the highest court in France with 20 years experience:

It is the work of my life to know a forgery, and the [will]... was not a forgery. (p. 74)

Hans Verhaeren (apparently Arnold Etman): Handwriting expert from the Ministry of Justice in Holland since 1951. He had written numerous articles and was a participant in the International Meeting of Forensic Sciences:

The indications of forgery were quite numerous, and... Obvious: for example, tremulous strokes, blunt ended pen lifts in most unnatural places, superfluous strokes tacked on to letters.... [However,] the numerous indications of forgery... Were also found in the known writings of Mr. Hughes. Therefore, what first appeared to be indications of a forgery... Became indications of genuineness. [That is my] first opinion. (p. 58)

Lothar Michel: writer of articles and books on forgery detection and professor of forgery detection at Mannheim University, said it was genuine. **Poly Jean Pfau** (apparently Ann Hooten of Minnesota): Having testified in hundreds of cases, she was obtaining a college degree in questioned documents examination. It was her "firm conclusion that the will was genuine." **Daniel Casey** of Atlanta, who worked for the post office as a QD expert for thirty years said Hughes was the probable author.

The two universities mentioned in the will hired **Grace Kemp** of Memphis and **Montgomery Bagby** of Northern California. Both said it was a forgery. **Lon Thomas**, an expert from Gilroy, California, said it was a forgery.

Besides seeking handwriting experts, Rhoden investigated Hughes' life and questioned thoroughly his aides. He found, for instance, that although they stated that he never left his room, that there was an outside door from the roof that they did not have access to, but which was attached to Hughes' Nevada hotel suite. He also located a number of people who stated that they had seen Hughes outside his hotel room. Some had seen him in the area that Dummar had described. And then

Rhoden received a call from Alaska from a man who claimed he was the person who delivered the will to Dummar! The lawyer flew up to meet with this fellow and started to become convinced that just maybe the will was real.

The Alaskan said that he had been a delivery person for Hughes and that throughout the years he had personally handed out numerous bribes to many well-known politicians. Rhoden hinted that one of these pay-offs had been to President Richard Nixon. As the man's son worked for the Hughes' conglomerate, and had been promoted at various times in unusual ways, Rhoden began to sink himself deeper into the possibility that the media was wrong, that Melvin Dummar's strange story could be true.

Rhoden hired a scientist in Boston to check the type of ink used in the will. The chemist discovered that it was in Papermate ink, Hughes' favorite brand. Since Papermate puts markers in their inks for the express purpose of dating them, the ink expert was able to establish that this ink had been discontinued a few years earlier. In other words, if the Will had been a forgery, it would have had to have been written with a Papermate pen that was three to four years old, with the exact type of pen that Hughes typically used. Rhoden contacted once again his handwriting experts and had them continue their investigations.

Verhaeren discussed similarities in the linking strokes of the QD with the exemplars. He noticed that the same letter or word would be written smoothly at one time and then jerkily at another time. He noticed an I-dot shaped like a 2 on page one, line three of the will. This same I-dot was found in the exemplars. Pfau had made enlargements of each letter, and displaced numerous similarities. The experts also discussed how Hughes would spell the same word differently with the same correspondence.

In the suspect document, the following words are misspelled: COMPANYS, DEVIDED, CILDREN, REVOLK, FORTH, AIDS, EXECUTER. In Hughes' known writings, he misspelled many words including the following: COMPANYS, UNDEVIDED, WICH, AIRCRAF, TRUTHLY. In the QD the following words were spelled two different ways: LAS VEGAS/LAS VAGAS; AMOUNG/AMONG; McKAY/MACAY. In the exemplars these inconsistencies were found on the same page of writing: ASSETS/ASSETTS; NO/KNOW; PAIE/PAYED; DESERT INN/DESSERT INN (see Figure 6).

During cross-examination in the trial, concerning misspellings, Attorneys Dilworth, Lillianstern and Freece, lawyers for Hughes Tool Company, pointed out that consistent with the will, Melvin Dummar's handwriting also had misspellings (e.g., COMPANY'S; DIVIDED). The will also contained a much greater proportion of misspellings per page than did the amount of misspellings in the exemplars.

These opponent lawyers, had hired **Spencer Otis**, and also a few other lesser known experts. Having worked for the Crime Laboratory for the San Francisco Sheriff's Office, Otis had appeared in court hundreds of times. He testified that the will was a "rank forgery."

The forgery is a slavish copy. The line quality is slow. There is patching. Unnatural pen lifts. There isn't the natural variation in letters which everyone has in his handwriting and that's a dead giveaway. (p. 354)

Otis concluded after studying 453 exemplars, that the Dear Chester and Bill letter from *Life Magazine* was used as the model. He suspected Dummar who was known to have seen the sample in the book *Hoax* at a local library; however, Otis could not prove this.

Rhoden made the point that there were capitals in the QD that did not appear in the Chester and Bill letter, which matched other known capitals of Hughes. As Dummar could not have had access to these samples, how was it possible to create capitals that were accurate copies, he asked. Otis replied that the forger "had made a good guess."

Otis utilized numerous "superb blowups to illustrate his points," i.e., in showing marked similarities between the Chester and Bill letter and the QD. He noted in particular the similarities of the word OF which stands out in the will almost as if it were stamped. The shocker to Otis' testimony, however, concerned his initial pronouncement before TV cameras stating that the will was a forgery.

Rhoden: You didn't look at any exemplars at all, did you?

Otis: All right, I may not have looked at any of the exemplars at that time. It would have been a useless exercise.

Rhoden: You decided that the will was a forgery after comparing it to nothing!

Otis: I was familiar with Hughes' writing.

Rhoden: Are we to understand that you had exemplars with you in your brief case?

Otis: Yes.

Rhoden: But you didn't bother to open your briefcase... [to make a] comparison?

Otis: I didn't think it was necessary.

Rhoden: You were certain enough that it was rank forgery on May 5, 1976 to announce it on national television, weren't you?

Otis: I was. It was the rankest forgery I had ever seen. (pp. 355-361)

Rhoden pointed out in his text that a total of about \$200,000 was paid to questioned document examiners for both sides for their testimony!

The truth to this story rests to a great extent on whether or not Hughes actually

did write with tremors, patching, unnatural disruptions and inconsistencies. This brings us to the medical testimony and coincidentally to a case that this investigator became involved in.

The following suspect signature of David Goldstein, Figure 7, was questioned by his daughters after his death because it was written more slowly than the other signatures and because of the peculiar capital D. This man had had a stroke about ten years earlier and had died of kidney failure a few weeks after the suspect document was written. I was puzzled by the slowness and awkwardness of the signature, especially by the peculiar downstroke of the D of David. It seemed unlikely to me that a person would botch up the first stroke of his name. My associate, Thelma Seifer, suggested that his illness may have caused these discrepancies. After long hours of working with a light box and noticing that breaks occur in the exact same places in the exemplars as in the QD, I concluded that the writing was most likely genuine. Numerous letters superimposed. However, since the original document was located in Florida, and I reside in Rhode Island, I had to suspend final judgement until such time as I had access to the original. I wanted to check pressure patterns and other details.

Note in the sample of his writing the patching and shaky strokes. As the man had died of kidney failure, as did Howard Hughes, I was interested in the findings of the medical doctors that were called by Rhoden to discuss this particular malady and its effects on handwriting.

Dr. Alan Rubens, a neurologist from the University of Minnesota is an expert in this area. He stated that kidney failure or uremia, affects the brain because the kidneys are unable to remove all the waste from the bloodstream. He also said that it was intermittent so that effects of the disease would not be present all of the time.

As the disease progresses, the patient may show a variety of bizarre behaviors. He may develop paranoia.... Handwriting will be slow and labored. There may be sloppiness and misspellings... Tremors... Deletion of letters... [And] over-simplification. (pp. 234-235)

The doctor concluded that Hughes' ungainly writing was consistent with other people suffering uremic poisoning. He also concluded that the writing of the will was typical in this respect.

Alan Levine, handwriting expert, and president of the American Society of Professional Graphologists, himself, a medical doctor, felt that the introduction of this evidence by Rhoden was stretching the case greatly. Levine noted that there are numerous reasons for patching and misspellings, and to conclude that the cause was uremic poisoning rather than some other reason, such as the natural tendency of the writer, actually *weakened* Rhoden's case, for it clouded the issue.

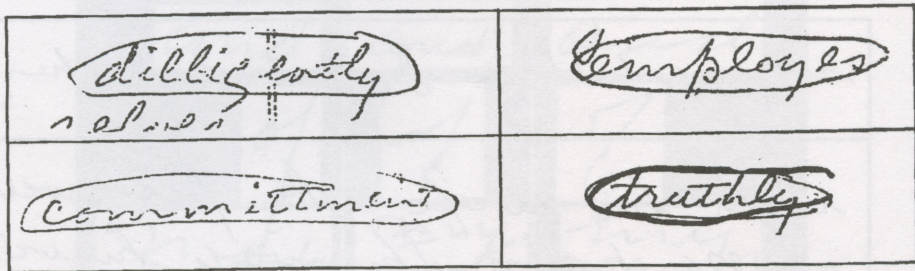


Figure 6. Some misspelled words in H. Hughes exemplars (circled by Rhoden or his experts in preparation for the trial).

Ordway Hilton's 1982 text *Scientific Examination of Questioned Documents*, states that the will is a forgery due to the numerous retracings, unnatural breaks and slowness. This view was supported in a major article by John Tierney, which appeared in *Science* 83. See Figures 8 and 10. Figure 8 includes Hilton's caption from his text. He concludes from the chart that the middle column is a forgery. Keeping in mind the possibility that Hughes may have been ill at the time of the writing, and that there are many other samples displaying unnatural breaks, retraces and tremors (see Figure 8), it appears to this examiner that the middle column indicates a common authorship with the other two known samples on this chart.

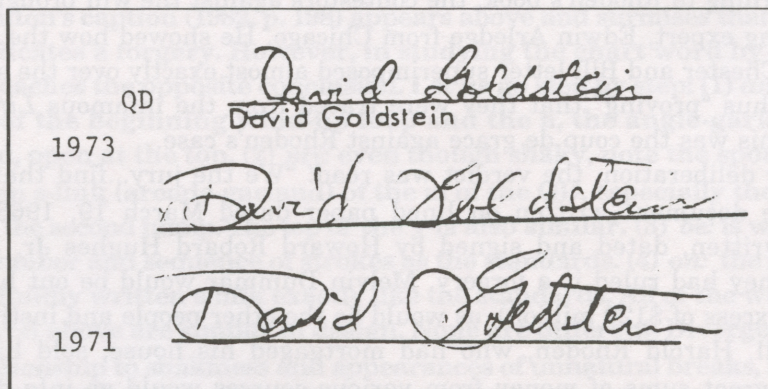
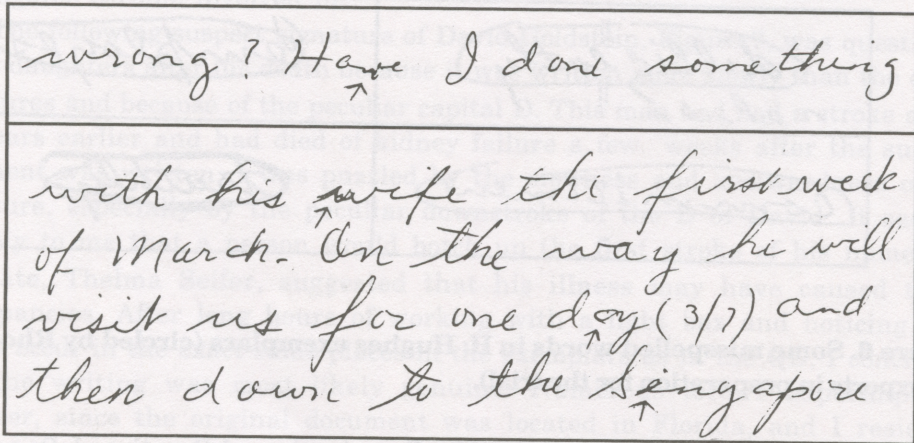


Figure 7-a. The signatures of a man who died from kidney failure. The top signature, the QD, was written after a stroke.



wrong? Have I done something
with his wife the first week
of March. On the way he will
visit us for one day (3/1) and
then down to the Singapore

Figure 7-b. The handwriting of a man who died from kidney failure. Note the tremors and disruptions in some of the samples. [Having suffered from a stroke, these disruptions may have been caused by either problem.]

Returning to Rhoden's book, the contestors against the will brought up a final handwriting expert, Edwin Arledge from Chicago. He showed how the signature in the Dear Chester and Bill letter superimposed almost exactly over the signatures in the will, thus "proving" that they were traced from the infamous *Life Magazine* sample. This was the coup de grace against Rhoden's case.

After deliberation, the verdict was read: "We the jury...find that [a] certain three-page document written on lined paper dated March 19, 1968... Was not entirely written, dated and signed by Howard Robard Hughes Jr. himself." In essence, they had ruled it a forgery. Melvin Dummar would be out his 1/16th, (a figure in excess of \$120 million), as would be the other people and institutions cited in the will. Harold Rhoden, who had mortgaged his house, sold his plane, and borrowed great sums of money from various sources would go into debt about a quarter of a million dollars. He was too poor to appeal.

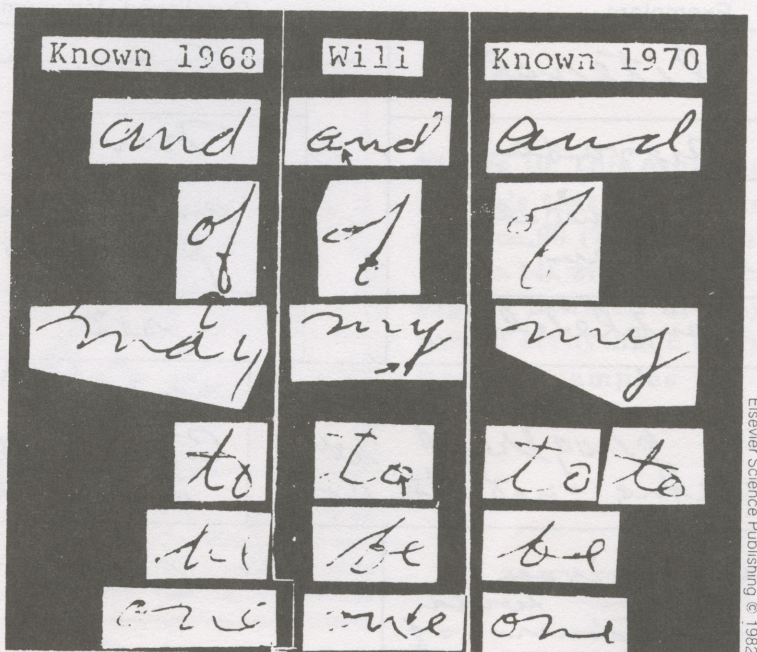


Figure 9.19. Defects of the will writing compared to Hughes's known writing in the outer columns include poorly written short, simple words. Also, the arrow indicates a small break between a and n in "and"; poorly formed letters in "of"; the addition of ending stroke (arrow) to y in "my"; the wrong direction of the ending of o, indicated by the arrow; the form of the beginning stroke and connection in "be"; and the form of n and the break between n and e in "one." The words illustrated are almost automatically written by a writer like Hughes; the forgeries are not.

Figure 8. Hilton's caption (1982, p. 198) appears above and surmises that the middle column indicates a forgery. However, in studying the chart word by word, this examiner reaches the opposite conclusion. Let us go step by step: (1) *and*: note the similarity of the beginning wind-up loop and the a, the angle-garland n and simplified d, open at the top. (2) *my*: even though shaky, note the spontaneously written open s-link (arcade-garland) of the m of the QD, especially the lightened upstroke of the second hump. The top of the y is also similar. (3) *be*: is written with the same number and sequence of strokes as the standards. (4) *on*: the n, although shaky, is a fluidly written s-link exactly like the standards. All of the words in the will displayed above are similar in design. None are different. Divergences occur only in relationship to shakiness and appearances of unnatural breaks, as between the a and n of *and*, and the n and e of *one*. These types of breaks very often appear in Hughes' writing. See Figure 10 below for additional references to this figure.

Exemplars	Questioned Documents
literally	Testament
nevada	Nevada
technically efficient	and as well previously
completely	sets
in progress ^{property} at agreeing not to con	sixteenth Christ of David O.
Mr. Trixas him with container of	Children
approximate costs and of performing the	of America -
funeral operation Admiral has over-played, and over-drama-	sixteenth;
answer my letter after he received it.	among my
	The remainder estate is to be
	of my devised

Figure 9. The column on the left contains isolated examples of Hughes' handwriting over a number of years which display arrhythmic and abrupt disconnections and tremors. The column on the right contains similar disruptions in words from the will. Clearly, the will is written more slowly and with more breaks than most of Hughes' known handwriting. Nevertheless, tremors, arrhythmic disconnections and slowness are intrinsic factors to many exemplars. Discrepancies can be explained by the possibility that this grave document was written with more deliberation than ordinary communiques. Top five exemplars from Rhoden, 1983; bottom four from Drosnin, 1985.)

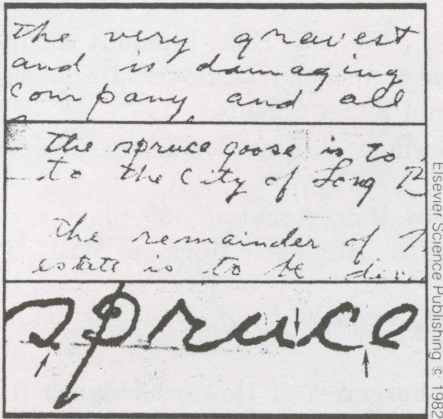


Figure 10. This exhibit appears in Hilton's text (p. 197) and also in Science 83 (Tierney, July/August, 1983, p. 14), with original caption. See Figure 9 which displays similar severe arrhythmic disruptions in known samples of Hughes' handwriting.

Howard Hughes' writing, top, was a favorite of forgers. The famed "Mormon Will," center, revealed typical flaws when magnified, bottom: uncertain lines in the s and "hidden pen lifts" between letters.

In 1983, I interviewed Harold Rhoden by telephone and asked him if he had had any inkling that the case would go against him. He said, "No, I thought we had it made." He had been completely surprised, and to that extent, it is possible that he misread the jury. Francis Klein, who reported this case for *The Commentary*, wrote that Judge Hayes, who presided over the case, had difficulty seeing the exhibits because of the position of the seats in the room. In the interview, Rhoden felt that the handwriting experts on both sides created a "washout." His conclusion: "The jury could never get over [the fact that] Melvin Dummar was a liar."

High Stakes remains an excellent literary work about trial law and the world of questioned documents. It is a mind-gripping story about one of the most bizarre men the world has ever known, and is written as a superb mystery.

It is also a political treatise about consensus realities, the role the mass media plays in shaping our consciousness and the value of direct experience. What we want to be true, what we believe to be true and TRUTH itself may often-times disagree.

Special Thanks to Harold Rhoden for providing many handwriting samples.

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